

Still \$1.50

MAY 1987



A CO-OPERATIVE PUBLICATION OF THESE ATARI CLUBS:
C.H.A.O.S. (LANSING) G.A.G. (FLINT)
T.A.G. (SAGINAW) BAY CITY / MIDLAND
B.K.A.U.G. (BATTLE CREEK) W.A.U.G. (ANN ARBOR)
G.K.A.U.G. (KALAMAZOO) G.R.A.S.S. (GRAND RAPIDS)

Atari News

Compiled by John Nagy

ATARI CORP has a new Vice President. Former TEXAS INSTRUMENTS and IBM exec JERRY BROWN (not the one Linda Ronstadt was seeing...) is the new VP and General Manager of U.S. Operations.

ATARI STOCKWATCH: After holding near the \$27 high for nearly three months, ATARI stock has in the last weeks been drifting steadily down, to about \$22 at this writing. Continued announced products without actual availability has weakened confidence in the company stock.

The Commodore-Atari lawsuits have finally been settled, although no details are available at this writing as to who pays who what. It is expected that Commodore will pay Atari SOMETHING as a result of the three-year old lawsuit that charged Commodore with patent infringements. Atari had an exclusive development contract with a small firm for support and graphics chips... and then the firm was bought by Commodore, who promptly told ATARI where it could go for chips. The name of the little firm? AMIGA, Inc. ATARI sued Commodore both for breach of contract and for putting ATARI developed chips in the AMIGA computer... when ATARI couldn't even get them.

In what MAY or MAY NOT be a related event, Commodore subsequently fired their president and management staff, according to the April 23 WALL STREET JOURNAL. The ousted officials are suing for NINE MILLION dollars. Ouch!

We were pleased to find that the rumored problems with the CHICAGO ATARIFEST were just rumors. As the FEST is to be held at the O'HARE RAMADA INN, outside the city limits of

Chicago, union costs are not and never were an issue. Make plans to be there JULY 25-26! More details in the next months.

"COMPUTER INQUIRY III" at the FCC reached a ruling... and decided to leave well enough alone, at least for now. Many thought that new regulations would be passed that would pave the road to much higher computer-access rates, adding as much as \$8 an hour to all telecommunication services like Compuserve and PC PURSUIT. The decision is based on a finding that the BELL OPERATING COMPANIES hold too many cards already in the telecom feild, and to allow them to go into new ventures in cometicition with the data networks would likely force them out of business, leaving only the BELLS to set service and rates.

8-BIT PRICES RISE. It may be due to Reagans latest flap with tariffs, or just a decision out in California, but dealers have been notified of a healthy 10-15% price hike in 8-bit ATARI hardware. Any time now, the XE may pass the ST as the "expensive" model in the ATARI lineup.

Last month we reported that Canadian BATTERIES INCLUDED was bought out by ELECTRONIC ARTS. Since then, rumors surfaced that EA found that they were not financially solid enough to complete the deal and that they might fold their own tent soon. No reasonable evidence for this rumor has turned up, and it is doubtful that the deal is in trouble. EA says call THEIR customer service lines from now on for support of BI products at (415) 578-0316.

BRITISH UNAXIAL LASERS has developed a CD based optical disk drive for the ST, to be sold at about 200 pounds (something like \$400) when released later this year. Sorry, thats all the info I have on this one.



CASTLE COMMUNICATIONS

1716 E. Michigan Ave.
Lansing MI 48912

PHONE (517) 371-4321

Hours: Mon-Fri 10 am-7 pm

Saturday 10 am-6 pm

ATARI 520 ST

VIP Professional	\$99.00
ST-Copy	32.95
J-Ram	14.95
DEGAS	29.95
Transylvania	14.95
Crimson Crown	14.95
Monkey Business (mono)	9.95
3-1/2" DISKS (10 PK.)	19.95

ATARI 8-BIT

Atari 1050 Disk Drive	\$179.95
Party Quiz (W/Controllers)	29.95
Infocom Hint Books	6.95
HAPPY 1050 Enhancement (W/ REV.7 Software)	149.00
800 Version OMNI-MON	39.00
Basic Reference Manual	2.95
All SPINNAKER Ed. Software	9.95

CLOSE-OUTS, USED EQUIPMENT & SPECIALS:

C.Itoh 1550 15" Matrix Printer	\$350.00
STAR STX-80 Thermal Printer	45.00
Atari 400 computer	35.00
ATR-8000 Interface W/64K	225.00
Basic XL	30.00

IBM PC & AT COMPATIBLES:

300/1200 Modem Cards	\$185.00
30 Meg Hard Disk Drive (w/Controller, cables, etc.)	425.00
5-1/4 DS/DD Floppy Disks	.99
3-1/2 ST Disks	1.99
Stargate	12.99
Defender	12.99
EPYX Sub Battle	29.95

TURBO WIZARD (IBM XT COMPATABLE)

DUAL 360K 5-1/4 FLOPPY DRIVES,
PARALLEL PORT, SERIAL (MODEM) PORT,
640K MAIN MEMORY, 8 EXPANSION SLOTS,
(6 FREE FOR EXPANSION), GAME PORT,
BATTERY BACKED TIME AND DATE CLOCK,
4.7 & 8 MEG SYSTEM SPEED (TURBO MODE)
AT STYLE CASE W/LEDS & KEYSWITCH
POWER SUPPLY, W/4 I/O POWER CABLES,
MONO-CHROME GRAPHICS CARD, HI-RES TTL
AMBER OR GREEN MONITOR AND AT STYLE
KEYBOARD.

15 MONTH FULL PARTS/LABOR WARRANTY!

TOTAL SYSTEM PRICE	\$1095
12 MEGAHERTZ AT COMPATABLE	\$1895

Selling and supporting Atari lines for over four years. Carrying a complete line of software at reasonable prices. We are your Atari Headquarters--give us a call and check our prices and knowledge.

If you purchase over \$100.00 worth of items at any one time with us you are qualified for the CASTLE DISCOUNT. The Castle Discount gives you 10% off our price on anything in the store except hardware.

M.A.M. this Month

Editor: Richard Barnes (517) 349-0513

Inside MAM: THE CLUBS-	PAGE
C.H.A.O.S. (LANSING)	5
G.A.G. (FLINT)	9
T.A.G. (SAGINAW/TRI CITIES)	11
G.K.A.U.G. (KALAMAZOO)	13
W.A.U.G. (ANN ARBOR)	15
B.C.A.U.G. (BATTLE CREEK)	16
G.R.A.S.S. (GRAND RAPIDS)	17

FEATURES:

MID MADNESS - Info	7
LETTER TO THE DEALERS	18
ZOOMRACKS II - Review	18
JOYSTICK MENU CONTROL - Program	21
COMPUTER MATHEMATICS - Article	21
ST CONTROL CHARACTERS - Info	22
MT-C SHELL - Review	23
UTOC for 8-bit ATARIs - Info	24
8-bit Disk Structure - Chart	25
WHAT'S IN A LANGUAGE - Article	26
FORTH STAGE - Learning guide	28
TURBO BASIC - Review	29
XL/XE BACKUP POWER SUPPLY - Plans	31
PRICE FIXING in M.U.L.E. - Hints	32
ANTIC AT HANOVER, GERMANY -	33
BOOT ORDER ON THE ST - Tech Info	35
ST MEMORY UPGRADES - Review	36
LAST HACKS - A ZIX in the hand...	38

JUL JUL JUL JUL JUL JUL JUL JUL JUL

MICHIGAN ATARI MAGAZINE is an independent newsletter published by the Capitol Hill Atari Owner's Society and is not affiliated in any way with Atari Corporation. Atari, the Fuji symbol and the names of various Atari computer equipment are trademarks of Atari Corporation.

This publication is the official newsletter of several independent groups of Atari 8-bit and 16-bit computer users. It is intended for the information and education of their members as well as the dissemination of Atari related information. Opinions expressed in this publication are those of the respective author and are not in any way official opinions of the associated user groups.

Other non-commercial USER GROUPS are granted permission to reprint articles from this magazine provided credit is given to the respective author as well as to the Mid-Michigan Atari Magazine. Most original files are available from the C.H.A.O.S. BBS upon request, and also appear in DL7 on COMPUSEVE for downloading.



PUBLISHERS NOTES
by JOHN NAGY
(517) 487-5646

MICHIGAN ATARI MAGAZINE is alive and well after last month's financial restructuring. As we anticipated, it was not without some casualty.

We are sorry to see C.A.C.E., the club from JACKSON, leave our publication. They plan to produce their own newsletter again, with their President, Harold Larue, as the editor. We wish them luck and hope for their continued co-operation in events and matters of common interest to Michigan ATARI owners.

W.A.U.G. (Ann Arbor) has decided to also put out a monthly letter of their own for their members but to remain in our magazine as well. W.A.U.G. members will have the option of getting M.A.M. at a reduced extra charge through their club, rather than to raise their \$5.00 dues to cover it.

The remaining six clubs have renewed their commitment to quality and full involvement in MICHIGAN ATARI MAGAZINE. With the present arrangements, and growing national attention, our circulation continues to grow despite the few losses at W.A.U.G. and C.A.C.E.

Look forward to MORE pages of FEATURE material than ever before in MICHIGAN ATARI MAGAZINE...

Some members of M.A.C.E. (Detroit's original ATARI club) took offense to my reporting of their club's decision to start charging GUESTS that want to visit their meetings. Gee, I and everyone I mentioned the charge to took offense too, that's why it was NEWS, and why I reported it. It was information right out of the MACE JOURNAL, neither gossip nor opinion, as a hostile letter from M.A.C.E. Secretary MIKE OLIN suggested.

In essence, the letter points out that M.A.C.E. perceived that people could buy the MACE JOURNAL, one issue at a time, for less money than a membership in M.A.C.E... and if they came to the meetings too, would have most of the benefits of membership at less cost than a full supporting membership. Rather than change the newsletter price structure or taking other action to add incentive to regular membership, M.A.C.E. chose to disincentive mere visitation with a \$2.00 charge.

M.A.C.E., according to the letter, has the right to make their own rules. True enough, and we have the right to report them. I have received dozens of comments from all over the country about this item since we reported it last month, and everyone had the same reaction-amazement. I would like to know that I am

As for my statement last month that "you may not be as welcome at some other club meetings as you might guess", I defend it as part and parcel with the NEWS, not gossip.

I DO wish to state that perhaps I should have made it more clear that ANYONE will be made ENTIRELY welcome at M.A.C.E. meetings... for a FEE.

Though I won't waste more room here printing the three page tirade, I trust that Mike, et al, will agree that I have fairly conveyed the general content of the letter. Mike also wrote that our readers should be "informed that, M.A.C.E. had its decline in membership well under way before the 'internal political disaster' occurred" that resulted in a separate new Detroit area club (MAGIC). So be it, though it seems an odd thing to want to publicise.

potential members are healthy for a club, not a drain on it. An organization should have enough obvious benefits to membership that financial strong-arming isn't needed. THAT is my OPINION.

It's not done that way most places. And THAT, my friend, makes it NEWS.

• • •

Don't take me to be ANTI-ST. I think it is a terrific machine, and like the MAC and AMIGA, it represents where computing is going. I would not even recommend an 8-bit machine to ANYONE who had no computer and was buying one NOW. The price difference between the 8-bit and the vastly more capable 16-bit computers is simply too close now. However, too many of our 8-bit users are prematurely closing the book on the 8-bit that is currently on their desk, prompted by the continuing reports of the death of 8-bit support.

Now, more than ever, the typical 8-bit ATARI owner thinks of himself as an ST owner that just hasn't got his yet. Although this is totally unnecessary for MANY of the 8-bit owners in light of their applications and uses, it has become a totem-like ritual belief... and THAT is as dangerous to the future of 8-bit support as anything else. DON'T BUY INTO FAKE OBSOLESCENCE: Use your 8-bit until it actually won't do what you need! You will be surprised how long that may actually take.





CAPITOL HILL ATARI OWNERS SOCIETY

SERVING THE LANSING AREA ATARI

C.H.A.O.S. is the CAPITOL HILL ATARI OWNER'S SOCIETY, serving the ATARI community of the Lansing, Michigan area. The CAMPUS HILL ATARI OWNER'S SOCIETY is the Michigan State University chapter of C.H.A.O.S.

Membership dues are \$12.00 per year and entitle the member to a 1 year subscription to the Michigan Atari Magazine, a free disk from our regular library, access to our other libraries and facilities, as well as access to our other resources. Dues may be paid at any C.H.A.O.S. meeting or by mail. If not using an official Membership Application, please include your Name, Address, Phone and a list of your equipment and interests.

Sysop John Nagy and C.H.A.O.S. invite you to call one of the country's finest BBS's at 517-371-1106. 300/1200 baud, 24 hours a day (ATASCII/ASCII).

Inquiries regarding C.H.A.O.S., mail orders, memberships and etc, should be sent to:

C.H.A.O.S.
P.O. Box 16132
Lansing, MI 48901

General meetings of the membership take place several times a year. 8-bit and 16-bit Special Interest Group meetings take place monthly. S.T.I.N.G. (S.T. Interest Group), for Atari ST owners, meets on the SECOND Saturday of the month. The 8-bit SIG Atari, for 400/800, and XL/XE owners, takes place on the THIRD Saturday of the month. The meetings take place at the MSU Physics-Astronomy Building, Physics Road, Room 118. Meetings begin at 10:00 am sharp and last until 1:00 pm. Members and guests are welcome to any SIG meeting that interests them. To get to a meeting, take East Grand River to the Collingwood Entrance for MSU. The first available left turn is Physics Rd. The Physics-Astronomy Building is about 1 block from the corner, on the right hand side. Park in the gated lot just past the building.

Illegal copying, or any violation of copyright laws, is not condoned or allowed at any C.H.A.O.S. sponsored function, including the club BBS.

ELECTED AND APPOINTED OFFICERS OF C.H.A.O.S.

Position	Name	Phone #
President	Leo Sell	349-0404
Vice President	John Baker	641-4430
Sec'y-Treasurer	Gary Ferris	393-2593
8-bit Rep.	Marvin Goldstein	332-4160
16-bit Rep.	John Johnson	355-4219
Membership Coord.	Gary Ferris	393-2593
Library Manager	John Baker	641-4430
Asst. Librarian	Malcolm Cleveland	485-6743
Asst. Librarian	Sally Nagy	484-1976
ST Librarian	Scott Evans	353-7645
Publ. Librarian	Richard Evans	351-2381
ST Publ. Librarian	Chet Kapusinski	676-4539
Program Coord.	Guy Hurt	484-7675
ST SIG Coord.	Brian Goluska	332-4415
BBS System Op.	John Nagy	487-5646
BBS Librarian	John Baker	641-4430
Newsletter Editor	Jeff Bone	321-5510

Presidential Address

President's Corner
by Leo Sell

Well, with the warm spring weather, this deadline has really snuck up on me. Since I bought this new house I don't have much time to devote strictly to the computer.

Hopefully, several of us will be going to the upcoming spring CES at the end of this month. Should be interesting to see what kind of promises Jack and company make this time. Much of CES will be quite positive though. It is an excellent opportunity to see what's coming to market in the overall consumer electronics field. We will see everything from the latest in electronic watches to the newest wall size televisions. You will certainly see reports next issue.

C.H.A.O.S. meetings of late have been real good. Both the 8-bit SIG and the 16-bit SIG have been showing new and exciting products. If you aren't attending you are missing a lot. As always, we need some help here and there. Here

is a list for you to choose from. Call me and volunteer soon:

Publicity Manager
Advertising Manager
Publications Librarian
Newsletter Editor
Assistant Disk Librarians

There are lots of members out there that are capable of helping in these areas. We hope to here from you.

I would also like to encourage you to let us know how we can better serve the membership. Of course, with suggestions you should also offer assistance. How about your opinion on the state of Atari computing. We'd like to hear more from you. C.H.A.O.S. is your Atari resource. Help make it work.

Meeting Minutes - 8

Secretary / Treasurer's Report

April's CHAOS meeting had some tough competition due to the excellent spring weather, but those 40-50 who attended were treated to a show well worth seeing.

Scott Evans demonstrated some of the commercial and public domain products that have recently been introduced for the ST line and things look good for the future of that line.

John Nagy showed some printer utilities and as we've all come to expect another good Disk of the Month. (He should throw in a lousy one just so we don't take him for granted. Just kidding. John).

Leo again discussed the need for volunteers to fill some critical jobs for the club such as publicity and advertising. We have an excellent core group of workers but more are needed. John talked about the publishers conference on Compuserve and how the Atari magazines people say they have to carry ST material to attract advertising which makes the mags possible. Unless people prove to the advertisers that the 8-bit market still is a good source of money then support from the magazines and manufacturers will drop more.

Guy Hurt brought in a new piece of software he found and it was raffled off to Charles Bailey. Congratulations Chuck.

The treasury balance is \$767.10.

That's it for April.
Gary R. Ferris
Sec/Treas.



Meeting Minutes - ST

APRIL ST-UTTERINGS
by Brian Goluska

The ST special interest group of CHAOS meets the 2nd Saturday of each month, at the Physics-Astronomy building of MSU. See the CHAOS title page for directions. The April ST meeting had 25 people attend (and this time I didn't have to count the janitor to get over 20). We've settled on a 2 ST standard hardware configuration, with 1 ST for library work and 1 for demonstration. The demo machine will have a monitor as well as being piped into the overhead video system, to allow the person doing the demo to talk without craning their head upward.

Steven Brooks has volunteered to be the ST "finance person", to coordinate membership and money handling with the Chaos treasurer, and Dan Van Epps has offered to help with disk library work during the meetings. This means we are effectively spreading the ST group's work and becoming more effective at meetings. At the start of the meeting, we had free discussion. Topics included the rumored 8-bit emulator, equipment prices (ST prices approaching 8-bit prices when buying a system, monitor, disk), and modems. Retail software was then demo'd: 10th Frame, a bowling program from Access Software, Wrestling, from Epyx, Arcticfox (Electronic Arts, ported from the Amiga), and Balance of Power, written by the legendary Chris Crawford.

Then some new library software was demo'd, including the ST group's first "Disk of the Month". This month the DOM has 3 fine games. Maybe we'll be able to continue with a DOM, or maybe we'll have a DONAT (Disk of Now and Then), we'll see how the progress of public domain software develops.

We also saw "Shiny Bubbles" from Xanth. Does it look like a real reflection? Can you mentally trace the rays?

Correction from last month: The article ended and suddenly had 2 more paragraphs. This was a computer error caused by an in-valid human keying new material over an old article, and leaving a couple of old paragraphs behind. Should have got a "TOO MANY KEYSTROKES - NOT ENOUGH THINKING" error.

See the ST publications library at the ST meeting next month.

Telecom

The CHAOS DOWNLOAD
by John Nagy, SysOp
(517) 371-1106

Not a lot to report this month, just more and more files going online as we try to get a "DISK FULL" message from the new 10 MEG hard drive.

System (and Club) Librarian JOHN BAKER has been busy cataloging and indexing a great selection of "standard" files for both the 8-bit line and the ST series. These are files that will be available indefinitely, supplemented with a few hundred "current" files. The index/file descriptions read like an all-star roster.

You will find that our BBS is perhaps the friendliest available, with online help automatically popping up when you seem to need it and disappearing again once you are back on-course. Don't be afraid to flop around like a fish on deck, you can't hurt anything, and learning by error is the fastest way possible. And nobody is looking (usually)!

Til next month, SEE YA IN CHAT!



Industry Report

ICD and the MIO MADNESS
Update by John Nagy (C.H.A.O.S.)

DATAPERFECT from LJK won't work with ICD's MIO interface box... unless you send it in for an update. For \$30 LJK will exchange you a new version of the fine database program. The sum and total of the update is that it no longer requires a translator disk to use the print option. No additional work has been done to make use of enhanced memory. The problem with the MIO is that access to the EXPANSION BUSS disappears when the translator is run, cutting the MIO and its printer interface out of your system. A lot to pay for a little item, it is nonetheless available from LJK Enterprises, 1351 Yves, Manchester, Missouri 63011.

MIO bugs also keep it from working with SYNFILE, the only other reasonable database package for the 8-bit ATARI. It, too, won't print, but for different reasons. ICD's TOM HARKER assured me that this bug was fixed and would be included in a replacement rom kit for all MIO owners. Other bugs being worked on include BUFFER problems (losing the pointer, or locking up), and RS-232 emulation. Expect this update to be available soon. Tom says that they still can't keep production up with the demand for this terrific external ramdisk/ printer interface/ modem interface/ hard drive interface unit. By the way, despite what you may have read elsewhere, you CAN use ANY DOS with the MIO, SPARTADOS by ICD is NOT required. It just works best with it.

ICD is also launching a new line of hard drives for the 8-bit AND the ST, their first venture into the 16-bit market. To be competitively priced at about \$650 for a 20 meg, it should include an internal CLOCK and ports to control additional "bare" hard drives. There will be one unit for use with the MIO (and also MACINTOSH!!), and another styled to sit slimly under the ST monitor with room inside for two hard drives. Additionally, ICD will shortly ship FASTBACK for the 8-bit ATARI, a very fast, menu driven backup system for any size hard drive. It will maximize floppy storage and can back up files that are bigger than a single floppy. It will also be able to make use of an "archive bit" which will be set by the new SPARTADOS-X DOS-on-a-cart, due out this summer. This will allow you to run FLASHBACK and only files written or updated since the last backup will be copied, substantially reducing time and effort. Tom Harker also mentioned a new SPARTADOS TOOLS disk for the 8-bit line, including many hard drive and crash recovery utilities, plus lots of other items like reassignable console function keys, etc. This one might be out in time for the CES show in Chicago in June. Watch for a review!

ATTENTION LANSING AREA!

RIDER'S

HOBBY SHOP

THE BETTER HOBBY PEOPLE

We bet you are tired of looking
all over LANSING for some good

ATARI GAMES

RIDER'S has been a software dealer
since 1980! We have a selection
of FANTASY, ARCADE, and BATTLE
SIMULATIONS from top name companies.
And if we don't have it- we can
get it... FAST! Often OVERNIGHT!!!



AND.... *TA-DA!*

OPEN
MON-FRI 10-6
SAT 10-4

ALL SOFTWARE IS DISCOUNTED!

485-0700



1609 E MICHIGAN - LANSING
4 BLOCKS EAST OF SPARROW HOSPITAL
FREE PARKING & ENTRANCE OFF MARSHALL



Power Without the Price™

NATIONAL COMPUTER CLINIC, INC.

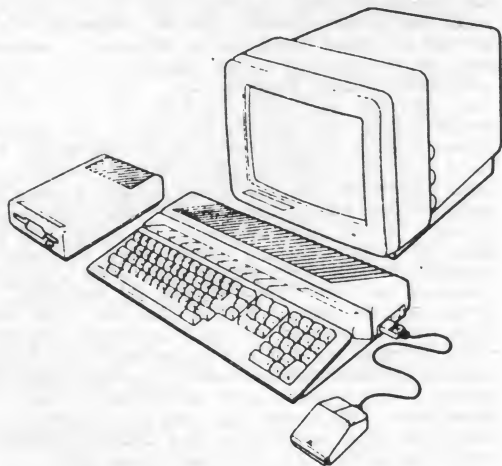
"We Bring You Up When You Are Down"

G-3514 S. Saginaw St. Burton, MI 48529 313-742-7100

Atari 1040ST Color System	\$999.00
Atari 1040ST Mono. System	\$799.00
Star NX-10 Printer	\$269.00
Atari 130XE Computer	\$149.00
10-3 1/2 SS/DD Disks	\$ 14.95

Atari 520ST Color System	\$795.00
Atari 520ST Mono. System	\$649.00
Star NX-15 Printer	\$429.00
Atari 1050 Disk Drive	\$149.00
25 DS/DD Disks	\$ 9.95

ALL SOFTWARE 25-30% OFF LIST - 7 Day Return Policy



Authorized Atari Sales & Service
Computer Swap 'N Shop

FULL SERVICE & SUPPORT

We Service Most Micro Computer Systems





GENESEE ATARI GROUP

Presidential Address

Presidential Mumbblings for May
by Jim Steele

Looks like another Michigan winter is history. Perhaps the great spring weather was responsible for the light turnout at the April meeting. Our notion of small discussion groups didn't work out once again, maybe next time, eh?

We did discuss the new newsletter rates. The consensus was to stay with it for now. The major gripe is the lack of feature material in among the local news. I've tried to keep it brief on these pages to make room for more articles. Of course, the fact that I don't have to write as much is incidental...

The proposal was also made that we at GAG bankroll an extra sheet (4 pages) from time to time. I'll have to check this out with the Lansing crew. Along the same lines was the topic of dues. (I'm glad I didn't bring it up!) Our dues are the lowest going. They just cover the newsletter, and then only if we cut people off when their dues run out. Looks like we're going to have to raise them to \$12/yr starting in August.

A future in Politics?... Even though it's only May, it's not too early to consider running for office. I know I've been in here for far too long. I mention this now so that you'll have plenty of time to think about it.

See you at the May meeting, -Jim

F.A.C.T.S. BBS 313 736-3920

10 meg on line open 24hrs 300/1200/2400 baud

Next Meetings:

May 13 6:30pm Neithercut
May 23 10am National Computer Clinic (Burton)
June 10 6:30pm Neithercut
June 27 10am National Computer Clinic

Genesee Atari Group is a non-profit group of Atari owners in and around Flint, Mi. Contact: Genesee Atari Group c/o Jim Steele 4711 Drummond Square, Flint, MI 48504

Disk Library

Disk Offerings for May
by Jerry Cross

Disk #190 contains an update to the Amodem terminal program. Version 7.4 now features just about every features you can think of, including support for the R-Time cartridge, Basic XE support for a HUGE buffer, and now features Y-Modem downloading protocol.

Disk #191 contains a load of math tutorials written by GAG member Clinton Pierce. These programs are written in Turbo-Basic, so you will need an XL/XE computer to run them.

Disk #192 and #193 are more AMS music files compiled by Jim Tuma.

Disk #194 is loaded with utilities. BudgetDB is a checkbook budgeting program, Superkey is a great key-macro program written by Keith Ledbetter, and ARC is an improved, but slow, disk compacting program. This system is now becoming the standard on both CompuServe, and GENIE.

Disk #195 is loaded with games. Featured is EUCHRE (pronounce You-ker). This is a bridge type card game. The computer will play both your partner and both opponents.

Disk #196 is a graphics disk. There are two koala picture dumps that allow you to dump pictures in any size, and even make greating

cards. Rapid Graphics Converter is a picture format changer that lets you change from Koala to other types of formats.

Disk #197 is a great program that turns your dot-matrix printer into a high-quality printer.

DAISY-DOT comes with 5 fonts, an easy to use font editor, and lots of documentation. There are too many features to print in this letter. Check it out!

That's all for this month, see you at the next meeting.

-Jerry



ST News

ST NEWS FOR FLINT
by Gil Merciez

I will be adding another 5 or 6 disks to the library in May so start saving your pennies now. In May there will be a heavy emphasis on games with at least 4 disks devoted to them.

For adventure/fantasy role playing addicts look for 3 Eamon adventures. This gaming system is being converted from Apple & IBM to the ST in GFA Basic largely by Michael Dettelsen. The Master Dungeon Disk & Beginners Cave has been in the GAG library since March on Disk #44. The three new adventures are all on one disk in one of two formats.

One disk contains the compiled programs that do not need GFA Basic or the runtime module. Another disk contains the GFA Basic source code as well as the Eamon Designer files. These files enable you to create your own adventures. Docs are included. The only thing you need is GFA Basic.

The way Dettelsen has currently set up the Eamon files, you will have to transfer the adventures to a separate disk or run them from the root directory. The code for the programs is rather primitive (spaghetti) and I'm sure could be vastly improved (structured) to make the listings much more readable. I spent a couple of weeks off and on working on the Eamon master program and have finally split the entire program into more manageable procedures and eliminated most of the GOTO commands.

Anyway, look for these Eamon adventures in May.

There will also be two disks of miscellaneous games ranging from card games to space arcade games. The kids will love it.

I will finally be releasing a disk of Music Studio songs. I've waited and waited for a decent public domain player program to show up but, alas, nothing. You will need to own Music Studio in order to best use this disc. I will include a player program from Activision however you must write a script file which includes pictures in order to play the songs; a definite hassle.

It's anybody's guess what other interesting goodies will arrive in time for inclusion in May's offerings. Be at the general meeting to check them all out.

After years of falling disk prices, the threatened increase in tariffs on certain

Japanese electronic products may cause the prices for disks to double. The last word I heard was that computer disks were included in the products that would be subject to these 100% duties. They are expected to remain in effect for at least 3 months. By the time you read this, you may already find the price of disks have shot up.

From what I have heard Japanese computer disks have not even been allowed in the country for the past several weeks. Remember that all of this could change with a shift of the wind but the situation should be more clear by the May meeting. It wouldn't hurt to buy an extra box of disks before the possible rise in price.

At May's meeting we will continue our friendly roundtable discussions on a variety of topics in hopes of helping everyone get just a little bit more out of their ST. If you have anything that you would like to discuss, whether it be a hardware or software problem, or just a problem in understanding some particular Desktop function, don't be afraid to ask. Hopefully, the GFA Basic packages will be in by May and we can get going on organizing a little programming/instructional group.

At my prodding, LaVerne at National Computer Clinic, is currently involved in an interesting project that could be extremely beneficial to those ST owners who have been thinking about a hard disk. Custom drives, anyone? More on this later.

In closing, if you are interested in printware type of programs (Printmaster, Pagesetter, etc.), check out Certificate Maker from Springboard recently released for the ST. The GEM interface is a joy to use and within minutes you can be printing out a large assortment of custom Certificates ranging from the serious side to humorously trivial.

-Gil



TRI-CITY ATARI GROUP

T.A.G. - SAGINAW, BAY CITY, MIDLAND

NEXT MEETING

The Tri-City Atari Users Group meets the second Saturday of every month at 2:00 pm at the Rudy Zael Memorial Library on the corner of Shattuck and Center in Saginaw. Upcoming meetings are scheduled as follows:

May 16th at 2:00 pm.
June 13th at 2:00 pm.

OFFICERS of TAG are as follows:

LeRoy Valley President 686-6796
Marty Schmidt Treasurer/Sec. 792-6029
Al Jennings 8-bit Disk Lib. 790-1980
Lance Middleton ST Disk Librarian
Ron Hoffman Assis. ST Disk Lib.

Club dues are \$20.00 per year. For this fee you get the Michigan Atari Magazine, support for both the 8-bits and the ST's, and full access to the club's public domain library. We currently have about 90 disks in the 8-bit library and 30 in the ST library. You can get copies of these disks AT NO CHARGE if you bring your own disk to copy on (time permitting) at the regular meeting. If you don't have a disk with you, you can get the 8-bit disks for \$1.00 each and the ST disks for \$2.00 each. Non-TAG members can get copies of the 8-bit disks for \$2.00 each and the ST disks for \$4.00 each. If you need to renew, do it now! If you haven't joined yet, then do it now!

HOT FLASHES FROM THE FUTURE!

Extra! Extra! Read all about it! TAG is having a desktop publishing meeting! Come on out to the May meeting and find out how to make your own PROFESSIONAL style flyers, newsletters, and publications. We'll be showing two software packages that are custom tailored to creating your own newspaper.

The first package will be News Station by Reeves software. Char Davis will demo this package, and will show us actual printouts of her creations. The club purchased this package and it will be raffled off at the end of the meeting.

On the ST side, Paul Bork will be demoing Publishing Partner by Soft Logik corporation. This is said by many to be the best desktop publishing package available for the ST. Come to the meeting and see for yourself. Hopefully by the meeting I will have the public domain font editor for Publishing Partner downloaded and available to anyone who wants it!

SNEAK PREVIEW

The month of June will find TAG taking a look at the various methods of backing up software. While TAG does not condone the illegal copying or pirating of software, we do feel that legitimate users should be able to exercise the right to back up their software. There are many products on the market that simply don't do the job, and many users get ripped off from false claims and advertisements. We'll talk about products that work, and many that don't! Tune in next month for further details.



Meeting Minutes

RELICS TO RELISH

Judging from the way that the April meeting went, it should have been held on April Fool's day (or maybe Friday the 13th!). The meeting started out all right. The first order of business was a discussion of the recent price increase, and it was unanimous that we keep getting the Michigan Atari Magazine. Besides, I think that I will have several advertisers by June! As a result of the price increase, however, we will no longer send three issues to people once they expire. The last issue they get will be marked "LAST ISSUE" (cute eh?). You will get NO issues once you expire, so remember to renew! We also discussed raising the price of library disks and raffle tickets, so that both functions would be self supporting. Both are good ideas, but we decided to hold off until I see if we actually get the ads I've been promised. This part of the meeting went OK, then...



It all started with poor Marty offering to do Al Paquette a favor. He brought his 800 to use for the demo of The Pawn. When he arrived, I informed him that the program required 64K to run, so he ran home to obtain his 130 XE. He returned, and 15 minutes into the meeting, we still didn't have a disk drive, so Marty offered (or was he badgered?) to go and get us a 1050 drive. He returned and we connected the system up -- and couldn't get the program to load! Char had two copies, the original and the backup, and both had worked on her system, but neither worked on the system we had on hand. To make a long story short, Char described the game to us, and we raffled it off anyway, certain that the problem lay in the disk drive. Ken Mercer won the game, and rumor has it that the game works fine on his computer! This was not the end of our troubles, however...

The next demo was 10th Frame, a bowling simulation by Access. Tom Wheeler, subbing for Paul Bork, demoed this excellent game on the ST. All of the sound is digitized, including the pin action sounds, the ball rolling down the alley, and the audience clapping when you get a spare or strike (the sound of a gutter ball is also included at no extra charge). The game allows you to play individually or in teams. The graphics are excellent, and game play is very good. This game was raffled off, and Joe Manelis won it. Things were now rolling smoothly...or so we thought!

The next demo was supposed to be of Championship Wrestling by Epyx, but Dan Barrowman didn't bring a joystick to play with. And guess what -- no one else did either! So all Dan could do was to load it up and let the computer whomp on him. Actually, it was fun to see Dan get creamed time after time!

While Char and Dan were trying to decide what to do, I threw up a few public domain programs for the ST that I got from GENie. The first was monopoly, and this is an excellent simulation of the real game. The board is graphically laid out on your screen in full color, and the computer handles all of the mundane chores, like banking. The computer will play up to three separate players against you, and it plays a mean game. All options are mouse controlled, and game play goes much faster than the actual board game. You even have options like trading. For free, you've got to get this game!

Another PD game that I displayed was Haunted House, an action adventure game in the same vein as Montezuma's Revenge on the 8-bit. The graphics are great, and game play is fast. Very good for PD! With these tidbits, we wrapped up the April Fool's meeting!

JIL JIL JIL JIL JIL JIL JIL JIL

***** EXPIRATION NOTICE *****

Remember, once your membership expires you'll receive NO more issues of the Michigan Atari Magazine! Renew your membership now!

*** E B V ***

8-bit Equipment Volunteers:

Al Jennings 130 XE
George Stuart Disk Drive, Printer Interface
Gerry Reno Monitor
Marty Schmidt Printer 1080i

ST Equipment Volunteers:

Ron Hoffman Monitor
LeRoy Valley 1040 ST
Dan Barrowman Printer, cable

Once again, a big THANKS to all of you who loan your equipment to the club.

SEARCHING...

The latest issue of STart contained a program called reboot that supposedly reset flags in your ST to cause a cold start when the reset button was pressed. As a side benefit, it was also supposed to turn off write verify for the floppy. While the source code contains the line to turn off the write verify, the PRG file doesn't! Anybody out there have a fix? Call LeRoy Valley at (517) 686-6796, or put it on the Chaos BBS.

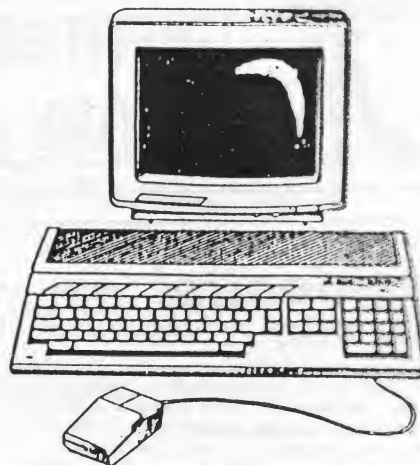
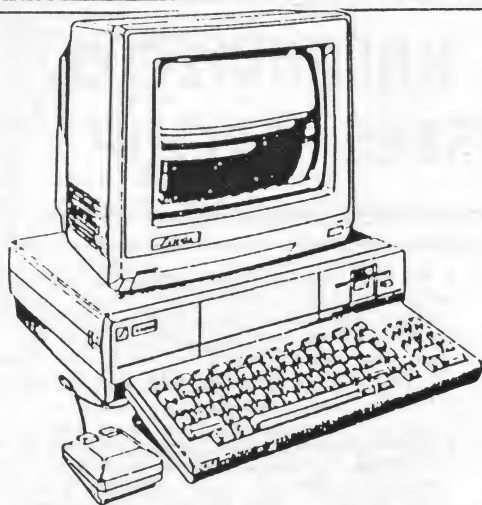
DATA PROCESSING MANAGER

needed for large international
educational foundation.

Experience in management and
operation of IBM System 34 or 36
required, as well as programming
knowledge in RPG II. Word
processing, personal computer,
accounting, and supervisory
experience preferred. Send
resume and salary requirements to
Ms. West, P.O. Box 1240,
East Lansing, MI 48826.



MAY 1987



Your Headquarters for
Computer Supplies

- Joysticks
- Head Cleaning Kits
- Printer Ribbons & Paper
- Surge Suppressors
- Printer Stands
- Wide Selection of Disk Holders
- Velcro Disk Carriers
- Amiga & Atari Computer Guides

* All Sizes of Floppy Disks *

STATE STREET
computer

334 1/2 S. State Street, Ann Arbor • 663-0090



WASHTENAW ATARI USERS' GROUP



NEXT WAUG MEETING MAY 12 AT WINES SCHOOL



Meeting Minutes

REPORT ON 4/14/87 MEETING
by MIKE OLIN

The meeting was called to order at 7:30 pm in the main meeting room at the Ann Arbor Public Library. The normal stomping grounds, Wines Elementary School, was closed due to Easter Vacation. There was a short demonstration of the Atari CPR disk and Doug Feldman announced that 5 copies were available for sale through the 8-bit library. Doug also noted that the ST library now contains more than 15 disks, but that sales would not be available until someone volunteers to run this portion of the WAUG disk library.

There was an in-depth discussion about the club's affiliation with the Michigan Atari Magazine. Craig Harvey spoke for several minutes on the pros and cons of the options available: 1) retaining MAM as our official newsletter, or 2) publishing our own newsletter and subscribing to MAM on an individual basis. The vote was OVERWHELMINGLY in favor of producing our own newsletter with Pattie and Bill Rayl taking on the duties of "Newsletter Editors." The club will continue to send it's meeting minutes for publication and members will be encouraged to submit feature articles to both publications, however MAM will be sent only to those members who pay for their own copies, i.e.: it will not be funded from the WAUG Treasury. It would appear that many members want the best of both worlds as a significant number signed up to continue receiving MAM.

Mike Olin repeated his concerns about developing a formal club charter and holding formal officer elections. There will be a meeting of the acting officers before the next general membership meeting to review his proposals which will be presented to the membership at the May meeting.

The remainder of the evening was dedicated to the feature topic: ARCADE GAMES. There were

demos of Leaderboard, Salmon Run, Alternate Reality ST, Ball Blazer, Rogue ST, Rescue On Fractalus, Karate Kid II ST and Nuclear Nick.

The next meeting will be held on May 12 and the feature topic will be Desk Top Publishing and Graphics Design.

HOW TO JOIN WAUG

Come to a meeting. WAUG memberships are \$10.00 for 10 meetings. Renewals are \$5.00. WAUG members receive a mailed copy of our newsletter each month and are able to buy disks for \$2.00 from our 8-Bit disk library (\$5.00 for our new ST library).

Wines Elementary School is located on Newport Road, just South-West of the M-14 overpass and 50 feet North of the intersection of Newport and Sunset. There is no exit from M-14 at Newport Rd. and no exit from West-bound I-94 to North-bound M-14. From I-94, you can exit at Jackson Ave, go East to Maple and take Maple to Miller. The meetings are held in the spacious teacher's lounge, with a 25 inch color monitor and a handy soda-pop vending machine.

JIL JIL JIL JIL JIL JIL JIL JIL

HOW TO CONTACT WAUG !!!

WAUG EXPRESS BBS: 313-662-3689 (300 Baud)
CLEAR THINKING BBS: 313-761-2444 (1200/300)
MOLIN'S DEN BBS: 313-420-0407 (1200/300)
By Mail: 4 Hermina Ct. Ann Arbor, MI 48103

JIL JIL JIL JIL JIL JIL JIL JIL

LIST OF FUTURE WAUG ACTIVITIES:

MAY 12 --- DESKTOP PUBLISHING & GRAPHICS DESIGN
JUN 9 --- OFFICER ELECTIONS & FLEA MARKET
NO MEETINGS PLANNED FOR JULY & AUGUST
SEP 8 --- DISK UTILITIES FOR ST & 8-BIT

BITS AND PIECES

FROM THE

BATTLE CREEK ATARI USER GROUP

Meeting May 14 at 7:00 PM



Meeting Minutes

MEETING MINUTES AND OTHER BITS
by Chuck Steele

Our April meeting was held Thursday April 16. We made an effort to contact everyone; however, we missed a few of you. Sorry we were unable to contact each of you. This month's meeting will be May 14.

We brought up the cost of the MAM. As most of you know our old news letter which was 4 to 6 pages cost only \$.23 each copy. Last year we decided to go with the Lansing group in their Magazine. This upped the cost to \$.50 a copy. The CHAOS group informed me in March that the cost was going up to \$.80 a copy. After much discussion it was decided that we would stay with the Michigan Atari Magazine. This cost each club member \$9.60 per year. This would only leave the club \$5.40 out of each membership dues to cover operating expenses and to purchase new hardware, software or text library material. So it was moved and voted on to raise the membership dues to \$20 per year. So all membership renewals will now be \$20 as of the next meeting.

We talked about the new Atari ST and the IBM clone. It will be interesting to see how the new clones will affect the computer market as a whole and the effect it has on Atari. We wish them well. It would be nice if the general public started thinking of Atari as a computer manufacturer rather than a game company. In Europe the perception is that Atari is a computer company and the ST's are selling well there.

Todd burned out a chip in his computer while trying to upgrade the RAM in this 800XL. So we didn't have the DOM. But we did have an ATARI movie which was playing while the meeting was going on. This was a sampling of some Atari software that covered such things as Games, educational, word processing, financial spreadsheets, astronomy, math, simulations, etc. I hope you enjoyed it.

Tom demoed a golf league spreadsheet that he made using SynCalc. With such a program one only needs to plug in the raw scores and the spreadsheet computes the rest (averages, handicaps). It is nice to see the Atari's put to a practical use. Thanks Tom.

The May meeting will be our last meeting until next fall. There will be a computer fair this month. We need some volunteers to help us man a booth at the Mall. Please give me a call if you are interested. We will also need some ideas and some programs to use for demonstration (some real neat stuff) because we will be going up against some big guns in the computer industry. So come to the next meeting with some good ideas.

Happy ATARI Computing!!

JIL JIL JIL JIL JIL JIL JIL JIL JIL

NEW BCAUG OFFICERS

CHAIRMAN:	Chuck Steele	964-1701
LIBRARIAN:	Todd Harris	965-5354
NEWSLETTER:	Tom Siemietkowski	963-4475
SECRETARY:	Mike Engle	964-3033
TREASURER:	Josephine Yeager	968-8401
MEMBERSHIP:	Dennis Martin	962-1024

Support your ATARI Clubs!!
Attend the monthly meetings.
Take part in the projects.
and your use and enjoyment
of your ATARI will grow with
your knowledge and experience!
GREAT CLUBS are part of what
makes POWER without the PRICE
more than just another motto!



GRAND RAPIDS ATARI SYSTEMS SUPPORTERS

Meetings

Wyoming Library
3350 Michael S.W.
First Wed. of the Month
Informal meeting: 6:30-8:00
Formal meeting: 8:00-9:00

Presidential Address

Notes From the APRIL Meeting
by RON FARGO

Rod Fulk ran a modem demonstration for our group this month. Rod hooked his 130XE to a projection T.V., and first displayed from the B.B.S. view while explaining in detail what goes on when you call a B.B.S. The second part of his demo was how to log on to a board, and what to do when you do. Rod did an excellent job of covering communications software, what kind and for what use, etc.

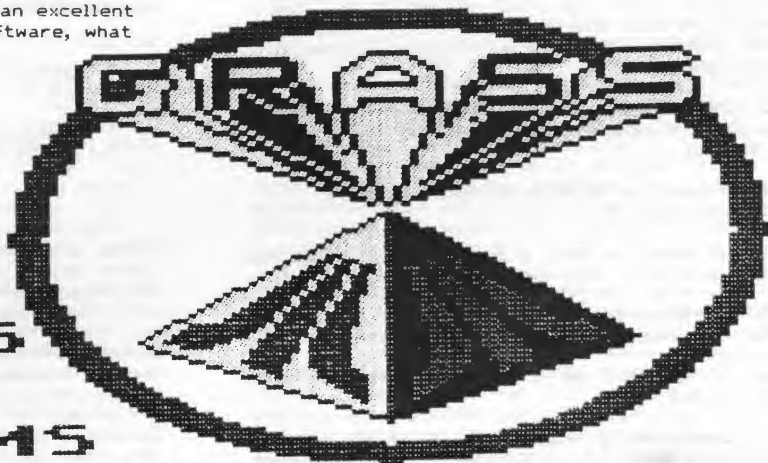
There was general discussion about interface devices, and different types of modems, and questions were fielded by Rod Fulk and Ron Fargo.

Our club had a contest for members to submit graphics drawings for a new LOGO for G.R.A.S.S.

The contestants displayed their designs on the projection T.V., and the members voted for the best entry. The prize of a one year subscription to the news letter was won by David Sheets, who made his entry using MAGIC, part of the TURBO BASIC utility package. His winning logo is reprinted here, but looks much better in full color! Our congratulations go out to David for entering, and a job well done.

No official business was done, and the balance of the meeting was a free for all!

GRAND
RAPIDS
ATARI
SYSTEMS
SUPPORTERS



//////FEATURE SECTION//////

Viewpoint

AN OPEN LETTER TO COMPUTER AND SOFTWARE DEALERS
From Lee J. Kronenberg
C.H.A.O.S.- Lansing, Michigan

Dear Dealers,

There are several of you whose good business practices have provided us users with many hours of happy computing. If you fit this description, this is a thank you note. We will continue to deal with you without hesitation.

However, there are others of you whose business practices are so shoddy that we cannot, in good conscience, continue to waste time, effort, or anger. You have lost us as customers. Don't blame your prices - blame your services. For the same reasons that you would not deal with questionable suppliers, we will not accept some of the things you have done.

Here are some of the reasons that we won't deal with you again. For these reasons also, we will advise other potential customers against dealing with you.

DON'T:

1. ...Advertise a program for \$45.00 and then notify me that the price is actually \$63.00 - that the magazine made a "mistake" publishing your ad.
2. ..."Lose" my cashier's check when I refuse to pay the added cost to buy the higher priced software.
3. ...Advertise a program when you don't actually have it.
4. ...Promise to send a program immediately and then give me a "due-out" for several months.
5. ...Send my friend the same program that has been due out to me for several months.
6. ...Promise to get a program for me and then not do it.
7. ...Quote me a price which is \$20.00 more expensive than the price you charged my friend two weeks before.
8. ...Send me a program for an Apple Computer when my order said ATARI.

9. Force me to pay the shipping costs to return a program for which you erred. Reimburse me for those costs.

10. ...Promise to write a program for me and keep me waiting two years to get it. Then, to lie that it was completed, but later destroyed by: the heat, the dog, the computer, the magnetic forces of the earth (or so on).

11. ...Promise to fix my computer within 24 hours, and then not touch it until I begin to camp on your doorstep.

12. ...Estimate the cost of repair at \$50.00 and then tack on \$20.00 because the insulator on the infidibulum was furdazzled, and you couldn't (means: didn't try to) get in touch with me.

13. ...Order a program for me, promise to save it for me and then sell it to someone else because it meant a quick extra buck for you.

14. ...Tell me you have a program in stock and when I rush down to get it, you tell me you can't find it, your salesperson sold it, the program is bad, or your dog ate it.

For all these things and more, Goodbye dealer. I won't say it has been nice because it hasn't been! We users are tired of the false promises, the lies, and the absolute deceit. We will deal with your competitor even if it means higher prices. Sad - it could have been you, if you had only treated us the way you yourself would like to be treated.

ST Review

ZOOMRACKS II
review by LeRoy Valley (TAG)

Simple yet powerful. How often have we, as users, heard these words used to describe every new database that comes along. Zoomracks II by Quickview Systems, makes this same claim and, for the first time, I'm inclined to agree. Quickview Systems does a wonderful job of making their database very usable to first time users, and yet still provides a lot of horsepower for the more experienced and demanding user. Zoomracks II is not copy protected and works very well on my Hard drive.

Zoomracks II is based on a "rack" metaphor, identical to the original Zoomracks. Information is stored on "Quick Cards", and

these cards are in turn stored in racks which may be loaded into memory (you can load up to 9 racks into memory at once). A good analogy is that of the time card rack in most factories. Worker's time cards are stored in racks. The only line visible on the time card is the top line which is generally the worker's name. By pulling the card out of the rack, you can access all of the information on that worker. Information on Quick Cards is stored in fields (called field scrolls), which are completely user definable. Each Quick Card can have a maximum of 27 fields, and each field can contain up to 250 lines, 80 characters per line.

Upon entering Zoomracks II you are presented with a screen layout which is laid out very well. At the top of the screen the current racks loaded into memory are shown. The main part of the screen shows a disk directory of all racks and the size of each. Near the bottom of the screen there is a menu box which displays all of the currently available commands. The last line on the screen shows the current Quickcard number and a "gas gauge" which shows you how full your memory is.

All input selections can be entered with either the keyboard, or by pointing and clicking with the mouse. To load a rack, simply point and click. If you load multiple racks, all of the rack names will be displayed at the top, and, by going into multirack mode, you can also view all of the racks simultaneously on the screen. To accomplish this, Quickview uses a feature they call Smartzoom, which compresses the text (usually removing the vowels) so that the first line of each card is still readable while occupying a small amount of space on the screen. By clicking on the card, you can select that card for reading, updating, or printing.

Upon entering Zoomracks II, your first task is to create a rack and a new quickcard template. The template defines how all of your quickcards will look for the entire rack. The new rack is created by simply pressing INS Z and you are automatically placed in the template edit mode and asked for the first fieldscroll name. You can create multiple fieldscrolls on the same line, or place them on individual lines. The names of your rack or fieldscrolls can be changed at any time.

After defining the quickcard template you are now ready to enter your first card by pressing INS Q. This creates a new quickcard and prompts you to enter text for the first fieldscroll. The tab key advances you to the next fieldscroll, and a return enters the quickcard into the rack. If, after months of entering data, you need to make a change, don't worry. Zoomracks II allows you to reposition, delete, and add fieldscrolls. This is a great feature that most other databases don't have! Remember though, once you delete a fieldscroll from the template, you delete it for every card in the

rack (along with all data associated with the fieldscroll). If you make a major mistake, Zoomracks II supports the UNDO key. In most cases, this key will save your you know what.

Along with editing the quickcard template, you are also given a host of commands to edit the text contained in fieldscrolls. You can cut a character, word, or line. And anything that you can cut, you can paste. The ability to paste an entire Quickcard or fieldscroll into the existing fieldscroll is really slick. You can browse through text, moving a word at a time in either direction, and you can also jump to the beginning or end of the fieldscroll. Once again, you can undo all editing changes at any time by using the UNDO key. Also at your disposal are commands to reformat existing text. You can adjust the right margin, set tabs, split an existing line into two lines, or join two lines into one. A nice touch is to allow you to use either insert or typeover mode. Once all of your changes are set, simply use the CTRL R (Reformat Paragraph) command. Zoomracks II actually has all of the commands necessary to make it a mini word processor.

Since you have the capability to load 8 racks of data (rack #1 is dedicated to macros - I'll get to that later) and each rack can hold thousands of cards, you need commands to move around easily. Zoomracks II has two move menus: the Next/Prior menu, and the Goto menu. The Next/Prior menu is meant for local moves. With it you can move to the next or prior: Quickcard, fieldscroll, rack, or line. Using one and two keystroke commands, you can quickly move back and forth between any of the items mentioned above. When you have to move to a specific spot, you use the Goto menu. Using the Goto menu you can: move to a specific rack, move to the beginning or end of a rack, mark your current location so you can return to it (very nice touch!), and you can also search for a text string! The last option is very handy for finding a particular quickcard in a rack. The search option also has what's called a search lock. This tells Zoomracks II to find and lock onto any card which matches the specified string. These selected cards are then considered your entire rack until you disable the search lock mode. Very handy for selecting and printing out specific cards.

While all popular word processors have the ability to cut and paste, not many databases sport that feature. With Zoomracks II you can cut, copy, paste, and replace racks, quickcards, fieldscrolls, and output forms (more about this later). Zoomracks II has four buffers: a line buffer, a fieldscroll buffer, a quickcard buffer, and a rack buffer. When any item is cut or copied, it is placed in it's respective buffer. I used this option to get around the fact that Zoomracks II does not support multiple column printing. I wanted to print labels three wide, so I used one rack to create the labels.

then printed the labels to a fieldscroll. Then I created a new rack with a quickcard with three fieldscrolls on the same line (LABEL1, LABEL2, LABEL3). I replaced the fieldscroll with the printed out one and I had a label printout three wide! The flexibility that this option gives you is tremendous.

Of course, any database is worthless unless you can output your data in the form that YOU want it. Zoomracks II allows you to output your data to the printer, the screen, a fieldscroll, or an ASCII text file. You have a great deal of flexibility in building your own output form. You can send printer init codes, specify headers and footers, and print all or part of any fieldscroll! You can even put remarks in your output form to remind you why you did something and have page numbers printed! Any text entered in the output form that is not part of the form and is not a remark gets printed out just as it would on a word processor. Thus you could conceivably generate a form letter in the output section of Zoomracks II and specify field names where names and addresses go! Output forms can be stored in racks, so you can build a library of output forms for any application! My disk catalogue has several output forms -- one for three wide labels, one for two wide, and one for single width. It also has an output form to print a listing of the current software that I have. The output section is a joy to work with!!!

Zoomracks II also supports limited math functions (add, subtract, multiply, and divide) and sorting. It has two registers into which you can either enter numbers manually or load them from fieldscrolls. The number from the register can then be placed in any fieldscroll. The adding machine has the capability to sum all numbers found in the highlighted fieldscroll, and it can also sum all numbers (of the highlighted fieldscroll) of ALL cards in the rack. If you need to sort your rack on a different fieldscroll, don't worry. Just move to the fieldscroll you want and press S. The only drawback is that it treats numbers like letters... 19 comes before 9 (use 09).

Perhaps the most exciting feature of Zoomracks II (next to the output forms) is the capability to use macros. All macros must reside in a rack which starts with the letters MAC (i.e. MACDISK). If a rack's name is MACAUTO it gets automatically loaded when Zoomracks II is run. Each macro rack can contain 27 macros (A-Z,*) and only one macro rack can be loaded into memory at one time. However, you can load in a new macro rack whenever you need one. To create a new macro you simply place Zoomracks II into learn mode, then execute the keystrokes that you want the macro to perform and assign it to a letter. You can now run this sequence of keystrokes once by invoking the macro, or you can run the macro n times by using #n prior to specifying the macro name. In addition to all

of the normal Zoomracks II commands, macros have an expanded set of commands which include looking for user input, ringing the bell, and much more. Macros really make this program perform -- don't be afraid to use them! If a macro is named \$, then it will run automatically once the rack is loaded up.

A very unique (as if Zoomracks isn't unique) option available in Zoomracks II is the ability to display Degas pictures. You simply enter the name of the Degas picture into a fieldscroll, then execute the Zoom Degas file function, and the picture is displayed on your monitor. This opens up a great deal of possibilities. If you develop macros for applications, you could automatically call certain informative pictures up when different functions are performed. You could catalogue your Degas collection, and view it with the same database!

Well, we've covered all of the main features of Zoomracks II, and I'm telling you, it is an excellent program. The documentation is very good and they give you a template for your function keys along with a reference card that covers all of the commands available. But, they say no product is perfect, and Zoomracks II is no different. Here, then, is a list of changes and/or additions that I'd like to see:

- 1) The Search function does not look for an exact match. If the search string is UTIL01 and Zoomracks II doesn't find it, it searches for UTIL0, then UTIL, etc. There are times when I need an EXACT match. If it doesn't find it, tell me NOT FOUND.
- 2) I need 132 column support. Currently Zoomracks II is limited to 80 columns. I can't put my printer in condensed mode and print labels three wide. Actually, Zoomracks should support 256 columns for the wide carriage models as well. If you are listening Quickview, make the screen scroll right and left to support it on a color screen!
- 3) The macro command set should be extended to include at least an IF-THEN statement. Also, since you can see the quickcard number at the bottom of the screen, why can't I find a quickcard based on that number (and have a macro command to extract it).

Well, those are my gripes, small as they may be. This package is dynamite, and anyone can run it! (No fooling.) The list price is \$149.95, but most mail order houses are selling it for \$95-\$100. If you need a database, and don't want to spend weeks learning it, then buy Zoomracks II. Quickview also offers starter packages with prebuilt applications for business, home, and clubs.

JUL JUL JUL JUL JUL JUL JUL JUL



For all the rechair programmers out there, here is a small modification you can do to the Menu Program that Analog provides on their disk every month. Place a copy of your current Analog Disk in the first disk drive and just enter the following lines and list to your disk by typing—

```

151 REM .....
152 REM * CHANGE LINES 151-180 OF *
153 REM * THE ANALOG MENU PROGRAM *
154 REM * TO GET AUTOMATIC CURSOR *
155 REM * MOVEMENT, AND JOYSTICK *
156 REM * TRIGGER SELECTION! *
157 REM .....
158 REM * G.K.A.U.G. * D. BRYANT *
159 REM .....
160 POSITION 0,2:?"-":POSITION 1,21:?"USE
161 <SELECT> AND <START> or <TRIGGER>"
162
163 Y=2:X=0:XX=X:YY=Y:LOOP=1
164
165 LOOP=LOOP+1:IF LOOP=100 THEN C=5:LOOP=1:GOTO
166 200
167
168 IF SIRIG(0)=0 THEN 250
169 C=PEEK(53279):IF C>5 AND C<=6 THEN 175

```

If you're a student, and are studying ANY branch of mathematics, a computer is only a little less useful than a calculator. (You can't take a computer to a test.) Most of my past math teachers cringed when they found out I used my computer to do my homework. One teacher, however, said "if you can write the program to do it, fine." So do it!



Computers are good at repetitive calculations. For example, synthetic division, extracting roots, factoring, plotting equations, and factorials. All of which you must be able to do to pass high school math. Math books and computers were built for each other. Many books have an algorithm (step by step instructions) for solving certain problems.

Example: to find a square root (divide & average method):

- a) estimate the root
- b) divide the radicand by the estimate
- c) average the quotient and divisor to get a better estimate
- d) repeat b & c as many times as needed.

There's the flowchart, now just write the program. There are other procedures that are usually spelled out in flowchart form, some chemistry examples; finding PH, balancing equations, writing formulas, etc...

If you study music, math is a principle concept of utmost importance. If you've got a tuning fork and can calculate an individual note on your computer (A above middle C, for example) accurately and find the frequency, do so. A has a frequency of 440Hz (and a SOUND value of 72). The next note up, B, has a frequency of A times the twelfth root of 2 which is about 466.16Hz. Use another mathematical method, called interpolation, to find the new SOUND value. Your notes will now be mathematically accurate.

You don't like art, don't like music, don't go to school, but just like to BBS. Well, even if you don't program, you're still not safe from mathematics. If you've ever Uploaded or Downloaded a file you know what a protocol is.

The Christensen protocol works like this (with variations):

1. receiving computer sends a NAK
2. sending computer sends a SOH, then a 1 byte block number, then another byte which is the 1's complement of the block number, 128 data bytes, then the checksum byte (=132 characters)
3. receiving computer its own checksum (started after the third byte after SOH), to see if it matches the 132nd byte sent
4. if it does, it sends an ACK and goes to step #2, if not sends an NAK and starts over again. **WHEW!** The 1's complement and the checksum are both based on mathematical principles.

"What's the point of this long winded article?" you ask. Ok, bear with me then I'll get down from my pulpit.

The next time you write a game, use a fractal-like shape for a background, use real projectile and acceleration formulas for missiles, and instead of lines use curves. When

you're listening to a lecture on calculus, write down an algorithm, run home from school, and right away write the program. And as you learn more, add "bells & whistles" to the program. But ALWAYS keep in mind your math whenever you program. If nature is mathematics, and nature is inherently beautiful, wouldn't you want your programs to be beautiful also?



ST Technical

From the ACCESS Key, Sacramento, CA - Dec. 86

SI CONTROL CHARACTERS

CLEAR SCREEN: ESC E Clears all characters from the screen and moves the cursor to Home position, the top-left corner of the screen. (Row1, Column 1)

CLEAR TOP OF SCREEN: ESC d Clears the screen from Home position to, and including the cursor position.

CLEAR BOTTOM OF SCREEN: ESC j Clears the screen from, and including the cursor position, to the bottom of the screen.

CLEAR LINE: ESC l Erases the entire line the cursor is on and moves the cursor to the leftmost column.

CLEAR BEGINNING OF LINE: ESC o Erases from the beginning of the line to, and including, the cursor position.

CLEAR END OF LINE: ESC K Erases from cursor position to the end of the line.

INSERT LINE: ESC L Inserts a new blank line at the cursor position and moves all following lines down one line, and puts the cursor at the beginning of the blank line.

DELETES LINE: ESC M Deletes the line that the cursor is on and moves all of the following lines up one line, adding a blank line at the bottom. Puts the cursor at the beginning of the line following the one that was deleted.

MOVE CURSOR ESC Y row+31 Col+31 The two characters that follow the "Y" specify the row and column to which the cursor is to be moved. Rows are numbered 1 - 25, and columns are numbered 1 - 80. **Note:** this command is four bytes long, instead of two.

CURSOR UP ESC A Moves the cursor up one line. **Note:** this command and the three after it, have no effect if they would move the cursor off the screen.

CURSOR DOWN ESC B Moves the cursor down one line.

CURSOR RIGHT ESC C Moves the cursor one position to the right.

CURSOR LEFT ESC D Moves the cursor one position to the left.

HOME CURSOR ESC H Moves the cursor to the home position.

INDEX UP: ESC I Moves the cursor up one line. If the cursor is on the top line, a scroll down is performed.

DISABLE CURSOR: ESC f Causes the cursor to be invisible.

ENABLE CURSOR ESC e Restores the cursor to visibility.

SAVE CURSOR ESC i Saves the current cursor position.

RESTORE CURSOR ESC k Moves the cursor to a previously saved position. If you use this command without previously saving the cursor, then the cursor is moved to the Home position.

INVERSE VIDEO: ESC q Characters are displayed as background color characters on a foreground colored cell.

NORMAL VIDEO ESC g Characters appear as normal.

WORD WRAP ON ESC v Causes the first character past the last displayable position on the line to be placed in the first character position on the next line. The screen scrolls up if necessary.

WORD WRAP OFF ESC w After the last displayable character on a line has been reached, the characters overprint; thus, only the last character received is displayed.

SET FOREGROUND COLOR: ESC b color Selects the color in which the character is displayed. The character "color" must be in the range of 0 - 15. In medium resolution, you may choose from four colors; in low resolution, you may choose from 16 colors. Note: this command and the next one are three bytes long, instead of two.

SET BACKGROUND COLOR ESC c color Selects the color of the cell that contains the characters. The character "color" is as above.

Examples:

1) To move cursor to row 5, column 10, you would use:

```
ST BASIC: PRINT CHR$(10);"Y";CHR$(36);CHR$(41)
PASCAL : write( chr(27),"Y",chr(36),chr(41) )
C       : printf("%c%c%c",27,"Y",36,41)
```

2) To clear the screen, use:

```
ST BASIC: PRINT CHR$(27);"E";
PASCAL : write( chr(27),"E" )
C       : printf("%c",27,"E")
```

(The ACCESS Key wishes to thank Ric Kalford, who gleaned the above information from the Developer's Package.



ST Review

MT-C SHELL from BECKMEYER DEVELOPMENT
Reviewed by Craig Harvey (W.A.U.G.)

When I first thought of getting an ST, the one thing I really wanted to do was run a bulletin board while being able to write programs -- at the same time. I had seen the ads from Beckmeyer Development Tools for a multi-tasking operating system called Micro RTX, so I assumed it would do what I wanted. After a couple letters and phone calls trying to confirm this capability, my understanding was that MT C-shell would easily do what I wanted, but due to all the other things it could also do, it would hog about 300K of RAM, so was only recommended for an ST with at least 1 meg of RAM. The Micro RTX would take up much less RAM, but it was not recommended for anyone who didn't know A LOT about programming multi-tasking software, including use of something called "extended service calls" (if I remember correctly). Not knowing anything about such things, and having a 1 meg upgrade on order, I took the plunge and got MT C-Shell.

MT C-Shell is a very powerful system that does provide the ability to run programs in the "background" while doing a totally separate activity in the foreground. The number of background programs is limited only by available RAM. This is just one small part of what it can do. If you are familiar with UNIX, you'll feel pretty much at home (based on comments from people I've showed it to). If you don't know anything of UNIX, you'll learn fast or get very frustrated, since to do a simple thing like getting a directory of what's on a disk takes a new command: "LS".

The manual is not intended to be a UNIX instruction manual, but it does give a complete list of available commands. There is enough

description of each to get you going and enable you to run programs, do normal DOS file management operations, and whet your appetite for some unfamiliar capabilities. These include making batch files that seem like they can do anything (e.g. automatically check if a folder has a new file in it every other Tuesday at 1:23 pm, and if so, create a new folder to move it to, while replacing any word beginning with "P" with the maiden name of your great uncle's mother-in-law). I suspect this is a bit of an exaggeration on my part, but then again I still have a lot to learn about it.

One other important function of this system, like UNIX, is multi-user capability. If you use this option, other people can call up via modem and log in using their computer as a terminal to run programs or manipulate files on your system.

Now the bad news. Although the system does allow multi-tasking, whatever you want to run in the background can not be looking to the keyboard for any input. So although it should work fine to run a long compile and/or use as a print spooler, it would not let me run the Michtron BBS in the background. I confirmed this with another call to Beckemeyer, but was also given some good news for anyone who will be getting a BBS in the future.

Beckemeyer has received co-operation from OMI who make the BBST as well as the makers of the FOREM BBS, and revised versions of these are either available now or will be soon. Then they may be able to run in the background with MT C-Shell. Although I've heard of another revision of the Michtron BBS in the works, I don't believe it is planned to be compatible with MT C-Shell.

In closing, if you have a hard drive and a couple megs of RAM and like UNIX, this system is a must for you. If you have one single-sided drive and 512K forget it. For anything in between, you'll have to decide for yourself.

Eight is Enough

VARIABLE TABLE OF CONTENTS
BY Bill Eash

Have you ever seen a diskette full of programs and when you looked at the directory, it had ZERO sectors available. Wow! it really takes some doing to pack right down to the last sector. Or possibly you've seen a free sector count larger than was possible. But wait, don't be fooled, add the sectors of all files to see if the total is 707. If not, you have a diskette with a modified or damaged VTOC. Let me explain.

First, let's talk briefly about the Disk Operating System and it's "Volume Table Of Contents". There are two DOS control blocks in the middle of the diskette. They're placed there for quick access from either end of the diskette. One is the "File Directory" which contains the names and locations of the files on the diskette. The other control block is the "VTOC" and it tells DOS where and how much free space is on the diskette.

Let's look at the format of the VTOC, and you can begin to understand how some folks modify it to prevent further allocations on it (or fool you into believing it's completely full).

The VTOC control block is a single sector (128 characters)
location is sector 360.

byte 0 DOS puts an "02" here

BYTE 1 & 2 THE VALUE IS 707 DECIMAL or 'HEX'.
 maximum 02C3 but stored here as C302
 sectors (remember to reverse the low and
 to reverse the low and
 HIGH BYTES)

BYTE 3 & 4 same as bytes 1 & 2 on a freshly
 free formatted disk or what's left after
 sectors files have been added

byte 10 THIS IS THE ALLOCATION bit map. One
 to bit for each sector. If the bit is
 99 on, the sector is free

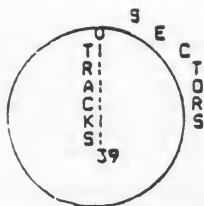
Before you skip the remainder of this article, be brave, it won't get any deeper. You can probably guess what comes next. If we ZERO the "number of sectors available", then we have accomplished what we started out to do. Boot DOS and list the directory and you'll see that there are ZERO sectors available where there were plenty only a few moments before.
(I use DISKSCAN to do my disk modification)

Now the second part. How do we correct the sector count or recover the free sectors that are there but not accounted for. Just reverse the process. Count the sectors allocated by adding the size of all files in the directory. Next, subtract that from 707 and convert the results to 'HEX'. Now place the number in the VTOC in the right field (don't forget to reverse the low and high bytes). That's the hard way to do it. I use a simple way, DOSWIZ will do it automatically (nothing to calculate).

Now that we have all this power, remember "a little power is dangerous" so before you do anything, COPY your diskette and use the backup copy to play with.

See Chart on next page.

DISK SECTOR STRUCTURE



40 Tracks (0-39)
 18 Sectors/Track = 720 (0-719)
 Track 0 = Sectors 0-17 or 1-18
 Track 39 = Sectors 702-719 or 703-720
 DOS can only handle Sector Numbers from 0 to 719
 Disk Drives will only accept commands for Sectors 1-720

Disk Directory 8 sectors 361-360
 VTOC - Volume Table of Contents 1 sector 360
 FMS - File Management System 3 sectors 1-3
 Total 707 sectors 128 Characters/Sector
 Total 719 sectors

DIRECTORY SECTOR - Names and Information for all files on disk-8 Sectors (361-368)

Each Entry - 16 Bytes. 8 entries on 1 sector (16 x 8 = 128 bytes)
 8 sectors x 8 = 64 entries total

For each Entry:

Byte	0	1	2	3	4	5	12	13	14
Status	Length	Length	Start	Start	Filename	Ext			
Byte	(in sectors)	(in sectors)	Sector	Sector	(primary)	or			
	LSB	MSB	LSB	MSB	or space	Space			

Bits	7	6	5	4	3	2	1	0
File	File	File	Spares	DOS-21	File Open			
Deleted	In Use	Locked			File	for Output		

VTOC - Keeps track of which sectors are being used - Sector 360

Byte	0	1	2	3	4	5	9	10	99	100	127
Use	Total #	Total #	Total Free	Total Free	Not	Sector Use Map	Not				
Byte	of Sectors	of Sectors	Sectors	Sectors	Sectors	Used					
	LSB	MSB	LSB	MSB							

Sector Use Map - Byte 10 to Byte 99:

Each Bit of each Byte represents one sector on the Disk

If the bit is 0, then that sector is being used

If the bit is 1, then that sector is free

Bit 7 of byte 10 represents Sector 1, etc., to Bit 0 of Byte 99 which represents Sector 720

DATA SECTORS - Saved or Listed Programs, Text files, Data Files, etc., - 128 Bytes

Byte 0 - 124 - Actual Data
 125 - 127 - Sector Identity Data (Link Data)

Byte	125	126	127
File #	125	126	127
This Sector	Next Sector of this File	This Sector (0-124)	
belongs to			

BINARY FILE HEADER - First 6 bytes of First Sector

Binary File Data - Created with Binary Save Options:

Byte	0	1	2	3	4	5
FF	FF	Start Address	Start Address	End Address	End Address	
Binary File		LSB	MSB	LSB	MSB	
Definition Bytes						

Boot Sectors - No Cartridge or DOS:

Byte	0	1	2	3	4	5
0 by	# of	Load Address	Load Address	Address to	Address to	
Tradition	Sectors	LSB	MSB	Start Executing	Start Executing	
to load				LSB	MSB	

Messages From S*P*A*C*E-September, 1986-Page 6



Just Starting

What's in a Language?

The following article was compiled by Sally Nagy (C.H.A.O.S.) from many sources, including Compute Magazine, Atari's Assembler Manual, Forth : a text and reference by Kelly and Spies, with the chart by Donald Forbes (J.A.C.G.).

Programming Languages are the means that we communicate with our computers. There are many different languages: BASIC, Logo, Pascal, FORTRAN, COBOL, Forth, Pilot, Assembly, C, ACTION, and more.

Each language was created for a specific purpose. There are certain functions performed by these languages that make them good for specific applications which others are not suitable.

Lets briefly look at how the computer operates.

Basically, the computer is a machine that is able to turn many switches on and off very, very quickly (a million or more times per second). Each switch is able to be represented by either a zero for off and an one for on. These switches are in the computer's memory. Numbers, letters and any other data in memory can be stored in the computer's memory. When you depress a key on keyboard, the computer translates these into a sequence of ons and offs.

The central processing unit (CPU) then reads these ones and zeroes to find out what to do. The 1's and 0's that the CPU responds to comprise a program at its most basic level, and actually make up the only type of program the computer can run directly.

Human beings, unlike computers, do not easily think in sequences of 1's and 0's. We need to have a language to communicate with the computer. The most primitive language, called machine language, simply represents the instructions to the microprocessor as a sequence of larger numbers, which when stored in the computer are represented to it as 1's and 0's.

Machine language is still pretty difficult, so a still higher language is used, in which each instruction to the computer is represented as an abbreviation (called a mnemonic), which for example tell the computer to transfer a number from memory to a register in the CPU. Each mnemonic is then assembled by a program which was written in machine language so as to form a sequence of 1's and 0's in memory. That program is called an assembler. This level of language is called assembler or assembly language.

Machine language instructions can be executed faster than BASIC instructions. Machine language programs use less memory than Basic programs. It is possible to write parts of a BASIC program that need to be done quickly and efficiently in machine language. They are subroutines called USR functions.

There are some disadvantages to machine language. It takes a programmer longer to write machine language program. Each instruction used has its own numeric code which needs to be sought out from a table each time they are used. Each machine language Operation Code (Op Code) must be placed in memory in the correct sequence for the successful operation of the program. The programmer must calculate and include in the instruction exactly how many memory locations must be skipped to arrive at the correct instruction, when branches are made to change the sequential operation of the program. The detail work involved in machine language programming is tremendous, and the chance for programming errors is very high.

Assembly language eliminates many of the drawbacks of machine language programming. Each assembly language instruction has its own mnemonic code which is an abbreviation of the operation to be performed. These are a lot easier to work with than numeric codes of machine language. The assembly language program has line numbers similar to BASIC, and the program is automatically placed into the correct sequence of memory locations by the assembler. Through the use of labels (combinations of words, letters and/or numbers) branches are made to labeled instructions, and no calculations are required (the assembler does it for us). The assembler creates the machine language program for us from the mnemonic codes, eliminating all the time-consuming detail work. The chance of programming errors is much less than for programs constructed by hand in machine language.

Assembler language is still pretty inconvenient for most people's needs, so assembler language is used to write languages that are removed one more step from the functioning of the CPU. These languages are the so-called high-level languages such as FORTRAN, BASIC COBOL, APL, FORTH and Pascal. They use convenient symbols that are simple for people to use, (Such as * to multiply two numbers), and convert them to the sequence of machine language instructions that the computer can understand. These high-level languages serve to bridge the gap between people and computers.

High-level languages traditionally work in one of two ways. They are either classified as being interpreted or compiled. A compiled language is one in which the entire program is converted to machine language once, and then when the

The compiled languages were the first developed. These include FORTRAN, ALGOL, and COBOL. They are often still the preferred languages for large mainframe computers. The advantage of a compiled language is that less memory may be required for the programs. The bulky source code doesn't have to be in the computer whenever a program is run. Since the source code is translated to machine code only once, execution of the program is usually quite fast. Compilation is time consuming. Every time the program is changed, it must be compiled again.

Higher level languages are continually being developed. People have very different programming styles. More languages provide more choices. Some special programming jobs require specialized tools. The language used for writing an accounting program might not be the best for writing an adventure game.

COBOL (COmmon BUsiness ORiented Language) was created for accountants. It is often used to write payroll programs and other applications in large data processing departments.

C has many advantages over other programming languages. It has a large variety of operators and commands which can be used to write

Forth is an unusual language. It was originally developed to control telescopes in observatories. Forth fits in to the scheme of languages roughly between machine language and high-level languages like BASIC. New functions and commands can be defined and become a part of the language. Forth is a language that lets us create our own personal language. We can build the language piece by piece until finally a single word runs the whole program.

```

B C C F F L L M P P
A O o O I o o a I
S B r R S g d s L
I O t T P o u c O
C L h R A l L
      N -
      2

```

used to separate FORTH commands.) You can control the screen with control-I just like in basic.

The first thing to do is make a working copy with programming space on the disk. Before we begin though lets write our first FORTH programs. Just type in the following lines exactly as they are printed and press return after each.

```

: DIR 0 LIST ;
: DIRP PON DIR POFF ;
: DIRL 0 50 INDEX ;
: DIRLP PON DIRL POFF ;

```

Do not worry about understanding them just yet I'll explain in detail later. Just to let you know DIRP sends screen 0 to the printer, DIRL lists the first line of every screen (this line is commonly used for a comment about the contents of the screen) and I believe that DIRLP is clear after the other explanations. These words are now a permanent part of your FORTH language, well almost. Next type SYS and press return. This loads a menu of disk control functions. Format your work disk and then use MAKEBOOT to copy your version of FORTH to the disk.

You now have a complete working copy of FORTH with our newly defined words as a permanent part.

You should go ahead and print out a copy of the doc screens. This is easiest using the SHOWLP command. The following are the screen numbers I found to be worth getting: 0-1 10-15 17-18 1B-1C 1E-2B. You can change the system to base 10 by using the word DX to return to hex type HX. It is easier to program in hex as you must do a lot of byte manipulation.

While I am going to try to teach you FORTH I do recommend you buy a book on the subject, I personally consider "FORTH: A TEXT AND REFERENCE" by MAHLON G. KELLY and NICHOLAS SPIES to be the best text available. There are others, but this covers all versions of FORTH currently in existence and is fairly recent (c 1986).

This should be enough to get you ready to start learning. There is really a lot to cover and we will be taking it slow so as to be sure you understand each section. If you have any questions just send them to MICHIGAN ATARI MAGAZINE, Attention Sally Nagy, and she will get them to me. While your waiting on the next article you might want to play around with FORTH. Try the VLIST command.

I guess its time to end- just remember that to learn FORTH you must make yourself like unto a neophyte or you will dwell in the realm of the : ? #5 msg forever.

Numerical Computations	4	4	2	2	5*	2	3	4	4	3
Character Handling	5*	5	4	3	2	5	5	4	4	3
Data structures	3	5	5	2	3	4	4	5*	5*	1
Control structure	5*	4	2	3	4	2	4	5	4	5
Console input / output	5*	4	2	3	4	2	4	5	4	5
File input / output	4	4	5*	3	4	2	2	5	4	2
Subroutine interface	2	3	2	3	5	4	4	5*	4	2
Low-level operations	3	5*	2	5	2	2	2	5	3	1
User friendliness	5	3	3	2	3	4	5*	4	4	5

What does it all mean? You may end up with only one wife or only one husband, but nobody reads only one book. You may end up speaking nothing but English, but if you program then perhaps now may be the time to teach yourself another language.



Software

THE FORTH STAGE-
A GUIDE TO LEARNING (Part 1)
by Ed Crisler (A.L.E.)

I have been programming for about 10 years. I started on the PLATO system and have since worked with almost all of the micros known to man- as well as a few that are not known. I have experience in BASIC, C, COBOL(UGH), TUTOR, FORTRAN and FORTH.

My hope is that through this tutorial I can further my own knowledge of FORTH while I help others.

Lets begin by looking at the program we will be using, ANTIC fig-FORTH. The reason I choose this version of FORTH is that it is widely available and is an excellent FORTH environment.

Let's start with the directory. Standard FORTH format is to use screen 0 as the user index. To view this type '0 list'. (The ' will be

[The first part of this review is an excerpt from the Turbo Basic Command List, compiled and translated by Dave and Laura Yearke, provided by the Western New York Atari Users Group. It may be reprinted freely provided this credit is included.]

In case you've just landed from Mars, or just plain haven't heard yet, **Turbo Basic** is the exciting new public domain BASIC interpreter that we received from the Atari Users Group in Holland. It works on the XL or XE series of Atari computers. It's almost too good to be true and should be a definite must for all XE or XL Atari owners.

Turbo Basic, in addition to offering 42 more commands and 22 more functions than Atari BASIC, gives the user 1603 more bytes of program space by "hiding" part of itself under the XL/XE's operating system. It also runs 3 times faster than Atari BASIC, includes most DOS commands, has advanced graphics and programming functions, and is insensitive to lower case or inverse characters for most commands.

TURBO BASIC COMMANDS:

Disk I/O

BLOAD	Binary loads file
BRUN	Binary load and run file
DELETE	Deletes file
DIR	Disk directory
LOCK	Locks file
RENAME	Renames file
UNLOCK	Unlocks file

Graphics

CIRCLE	Plots a circle or ellipse
CLS	Clears the screen.
CLS #6	Clear screen opened in channel 6.
FCOLOR	Determines fill color.
FILLTO	A fill command analogous to XIO 18
PAINT	Fill any closed object it
TEXT	bit-blocks text

Memory

DPOKE	Pokes 2-byte integer
MOVE	Block transfer
-MOVE	Like MOVE but starts with last byte
BPUT	Block put
BGET	Block get
%PUT	Puts number "as is" in 6-byte FP format.
%GET	Get a number stored with %PUT

Structured Programming

REPEAT	Start a REPEAT-UNTIL loop.
UNTIL	Terminate when condition met.
WHILE	Start a WHILE-WEND loop
WEND	Terminate a WHILE-END loop.

ELSE	Optional extension for IF
ENDIF	Ends an IF-ELSE-ENDIF or IF-ELSE condition
DO	Starts an "infinite" DO loop
LOOP	Cycle back to the start of a DO loop
EXIT	Exit a DO-LOOP loop
PROC	Start definition of procedure
ENDPROC	End definition of procedure
EXEC	Execute procedure

General Programming

PAUSE	Pause for n/60 second on US Ataris
RENUM	Renumber the program
DEL	Delete lines
DUMP	Display all variables and values
TRACE	Trace program during execution.
TRACE -	Turns trace mode off (default).
DSOUND	Uses channel-pairing for more range.
DSOUND	Turns off all sounds.
GO TO n	Alternate form of GOTO.
*L	Turn line-indent on/off
*F	FOR loops run 0 times if condition not met
*B	Allows break key to be TRAPPED
--	Special REM; puts 30 dashes in listing

Line Labels

#	Assigns current line number to label
GOTO	Analogous to the GOTO command.

Modifications

CLOSE	Close channels 1-7.
DIM	Automatically clears array
GET	Wait for key press, assign value to name
INPUT AS;	Prints text before asking for input
LIST n,	List program from line n to end.
ON a EXEC	Variation of ON...GOSUB for procedures
ON a GOTO	Similar to ON...GOTO using line labels
POP	Pops stack for all four types of loops
PUT n	Same as "PRINT CHR\$(n)";
RESTORE #	Restores the data line indicated by label
RND	Parentheses not needed
SOUND	Turn off all sounds.
TRAP #	TRAPS to the line referenced by label

Arithmetic/Logic

HEX\$(n)	Convert n to hex string
DEC(a\$)	Convert hex string A\$ to decimal
n DIV i	Integer quotient of n/i
n MOD i	Integer remainder of n/i
FRAC(a)	Fractional part of a
TRUNC(a)	Truncates fractional part of a
RAND(n)	Generates random number 0-n
\$nnnn	Allows input of hexadecimal numbers
n & i	8-bit boolean AND.
n ! i	8-bit boolean OR.
n EXOR i	8-bit Exclusive-OR.

Memory

DPEEK(m) Double-PEEK of m,m+1.
 TIME Time of day(numeric).
 TIMES Time of day string, HHMMSS.
 INKEY\$ Returns last character typed
 INSTR Returns relative location of AS within XS
 UINSTR Same as INSTR, but ignores case and inverse
 ERR Value of last error number
 ERL Line last error occurred at

Constants

%0, %1, %2, %3 - These four constants stand for the numbers 0-3, but save program space

(Now, my comments.)

Turbo Basic XL is a public-domain BASIC interpreter from Germany. It was written by Frank Ostrowski for the German magazine *Happy Computer*.

The command summary lists only the new commands of Turbo Basic. Turbo also supports all the commands of Atari BASIC, and will load SAVED Atari BASIC files. Turbo programs will load into Atari BASIC if none of the new commands are used.

Many of the new commands will be familiar to users of BASIC XL and BASIC XE. Turbo is not identical to either of those languages, however. Some of the new commands have the same syntax, and others differ. Turbo has commands that the OSS BASICs lack (CIRCLE and PAINT, for instance); the OSS languages have commands that Turbo doesn't (player-missile graphics, for one).

Turbo pays no attention to LOMEM; you get the same amount of space no matter what DOS you use. It is incompatible with the 850 RS-232 handler; the BASIC program loads over part of it.

You can also have 256 variables in your program, instead of only 128. Statement labels count as variables.

Since Turbo uses the space under the OS ROM; it will not run on a 400 or 800. It is incompatible with under-the-ROM and under-cartridge DOS systems.

There is also a compiler for Turbo Basic, and it is also public domain! The version currently available has all its prompts in German. An English version will be available soon.

The compiler will handle most BASIC programs. None of the immediate commands (LOAD, SAVE, etc.), will compile; nor will FOR loops with more than one NEXT statement. The compiled code is larger than the BASIC source, so some big BASIC programs can't be compiled.

Turbo Basic XL is an outstanding public-domain program. It offers many of the best features of other extended BASICs, plus a few of its own. It is fully compatible with Atari BASIC, and very fast. The price is right, too. I recommend it to all XL and XE owners.

Performance:

I tried some simple benchmark programs on various BASICs to compare their speed. Turbo Basic is a very fast BASIC interpreter; it turned in times comparable to BASIC XE. The compiler is even faster.

The BASICs tested were Turbo Basic XL version 1.5, BASIC XE version 4.1 with extensions 4.11, and Atari BASIC Rev. B. Three times are reported for BASIC XE. The FAST time is with the statement 0 FAST added to each program; the SLOW time is without that statement. The BARE time was run without loading the extensions file. (BASIC XL in SLOW mode will be about the same speed as the BARE times for BASIC XE. FAST mode times will be slower than the BASIC XE FAST times. BASIC XL with a FASTCHIP installed will be about as fast as BASIC XE.)

BASIC	1	2	3	4	5
Turbo BASIC XL:	56.0	41.5	58.1	59.4	43.5
Turbo compiler:	54.1	26.7	12.5	12.6	20.7
BASIC XE fast:	61.6	57.1	41.2	43.7	42.5
BASIC XE slow:	61.8	62.2	51.2	5790.0	64.4
BASIC XE bare:	237.0	70.8	97.6	5820.0	83.6
Atari BASIC:	237.8	109.9	163.2	6060.0	104.5

Test 1: Savage 500

This benchmark is a version of the Savage floating-point benchmark. This version was scaled down to 500 iterations (instead of the standard 2500) to stay within my patience limits.

The times on this test are determined almost totally by the speed of the floating-point code. Note the nearly identical times turned in by BASIC XE (without extensions) and Atari BASIC.

Test 2: FOR loop

This one is very simple: a FOR loop that goes around 50,000 times.

```
1 FOR I=1 TO 50000:NEXT I
```

Test 3: GOTO loop

This uses a different sort of loop: a GOTO statement in an IF. This loop goes around 20,000 times.

```
10000 I=0
```

```
10010 I=I+1:IF I<20000 THEN 10010
```

Test 4: GOTO loop part 2

This is the same as test 3, except that there are 5000 REM statements added to the beginning of the program. The long times in the table were gotten by looping 200 times and multiplying the run time by 100. This test shows the time spent searching for the line to branch to. The results suggest that Turbo preprocesses line numbers in a manner similar to FAST mode in the OSS BASICs.

Test 5: DISASM.BAS

I ran the program DISASM.BAS, a public-domain disassembler. I disassembled the locations \$0711-\$087F to the screen.

Atari Technical

130XE/800XL BATTERY BACKUP SYSTEM SHAREWARE, HARDWARE PLANS By: Pete Hunter

This Battery Backup system is designed to work with the Atari 130XE, or 800XL computer. If you are running a BBS on an expanded memory Atari, this will allow you to run the message bases in the Ram-Disk without fear of losing them due to those little power "blips" and long outages. The little 10 second power losses are the most frequent cause of heartache to a BBS SysOp.

Well, fear no more. This hardware project has been several months in the making and testing. I have been using it on my BBS (BBS: EXPRESS!) for about 3 months now and the Great thing about it is you don't even have to open the case on your computer as it requires no alteration to your computer whatsoever.

At first I thought about offering it to Antic, or Analog for a hardware project but then decided to release it as a SHAREWARE type, hardware plan. As you already know, Shareware really isn't Public Domain material. If you use these plans and they work for you, any donation you care to make will be appreciated and might encourage me to design a battery backup for the MIO board by ICD, which would certainly be cheaper than a UPS, transverter type system (about \$200.00 or more).

Plans for this Battery Backup are Copyright (c) 1986 by Pete Hunter Auctioneers Inc., 2760 W. Whiteside, Springfield, MO 65807

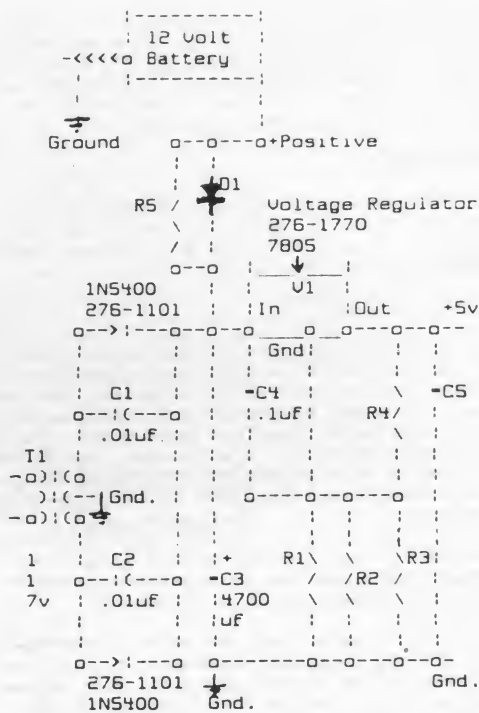
This device can be built for about \$25.00 from Radio Shack Parts. The Author accepts no responsibility for them due to inability to control user design techniques and workmanship. Send all inquiries or donations to the above address.

Power Plug connection to computer.

Pin Configuration

7.	.6
3.	.1
5.	.4
	.2

1. +5 Volts
2. Shield
3. Ground
4. +5 Volts
5. Ground
6. +5 Volts
7. Ground



NOTE: All part numbers given are Radio Shack Part Numbers. Other parts of equal value may be substituted.

Parts List:

- T1..Transformer..273-1515..18vct (2A)
- V1..276-1770..5v regulator
- Heat Sink for above..276-1367
- D1,D2,D3..276-1101..1N5400 Diodes
- R1,R2,R3..271-1301..10 ohm resistors
- R4..271-012..100 ohm resistor
- R5..Optional..See text!
- C1,C2..272-131..0.01uf capacitors
- C3..272-1022..4700uf..35v capacitor
- C4,C5..271-135..1uf capacitors

If you can't find a 7 pin, DIN plug like what is on your Atari power supply you can get a 5 pin, DIN plug from Radio Shack..#274-003 for the power plug....

If you use the 5 pin plug be extra careful as it is the same plug that goes into the Monitor Jack. If you plug 5 volts into the Monitor Jack, I am sure you would have problems... so paint the plug red or something like that if you use the 5 pin plug. Any of the terminals that are marked +5 or ground will power the computer. BE EXTRA CAREFUL WHEN HOOKING THEM UP AND OBSERVE PROPER POLARITY...

This power supply can be assembled without a PC board by using a 5 lug, terminal strip. Be extremely cautious as you will have 117 volts present. The two 117v wires on the transformer should be taped and insulated to prevent electrical shock. A PC board and plastic or metal case may be used if desired.

PRECAUTIONS

Some electronic experience is ESSENTIAL to build this project. DON'T attempt it if you don't have experience. Get a friend or someone knowledgeable in this area to help.

GETTING STARTED:

First wire the line cord to the two 117 volt power supply leads on the transformer and insulate them by taping etc. You may also want to put a 1/2 amp fast/blow fuse inline on one side of the power cord for protection. You can tell which side of the transformer to hook the 117v line to because the low voltage side has 3 wires coming from it and the 117v side only has 2 wires.

Assemble the rest of the circuit as per the diagram. Look the circuit over very carefully before starting.

If you use a metal case for your power supply don't let the regulator or heat sink touch it. Some people like to bolt the heat sink to the case for extra cooling but it will cause a short with this particular type of regulator. If extra cooling is needed, either use appropriate heat conductive insulators and bolt it to the case, or bolt it to a piece of scrap aluminium and keep it insulated from the case.

At the top of the diagram you will find "D1" and "R5"...This is the diode that allows the current to flow from the battery to the computer upon power failure. The resistor "R5" is a "BYPASS" "current limiting" resistor to allow the power supply to charge the battery. You may or may not want "Charger" capabilities.

If you use a Motorcycle, or Car battery you will probably want to charge it a small amount.

A 140 to 150 ohm, 1/2 watt resistor will allow about a 100 milliampere charge rate. A 700 ohm, 1/2 watt resistor would allow about a 20 milliampere charge. In order to determine, other charge rates and the proper combination of resistors I suggest you purchase an "Ohms Law Calculator" from Radio Shack for the small price of about 50 cents. It is a small, sliding, cardboard chart similar to a slide rule.

In summation of the charging system: If you don't want to attempt to build it just delete "R5" from the circuit and charge the battery manually, with a separate battery charger. You can insert a DC Amp Meter in series with "R5"

to determine the amount of current that is actually going to the battery. The Diode "D1" will only let the current go in one direction which is from the battery to the computer. No voltage will be allowed to go "upstream" from the computer to the battery.

If you use lantern type batteries, they are not designed to be charged so delete "R5" from the circuit should you decide to use this type. I recommend a Motorcycle, Garden Tractor, Car Battery, or Gel Cells be used as these will keep the computer going for several hours. If you use Gel Cells be sure they are at least 5 Amp hour batteries. A 12 Volt battery IS NECESSARY even though we are only ending up with 5 volts to the computer. The 7805 regulator needs at least 3 volts above it's operating voltage to work properly. Thus the 12 volts as 8 volt batteries are in short supply. Anything other than 12 volts are not recommended.

If you have trouble, questions, or suggestions please call me at my BBS in Springfield, MO: The Auctioneer BBS 417/887-4969, or write to me.

Please feel free to share these plans with your friends, or other BBS'. They are intended for public distribution and may be shared or distributed freely.



Software

Price Fixing in Mule
by Ralph Fellows (C.H.A.O.S.)

(Although M.U.L.E. is virtually an antique game for the 8 Bit Atari, it remains a favorite. Here is a reprint from an ENERGY Magazine of several years ago, written by C.H.A.O.S.'s then reigning M.U.L.E. expert.)

We have an experienced group of M.U.L.E. players. Each has played dozens of games.

Long ago, four of us decided to see if we could maximize the total output of the colony. One player bought all four river plots and fed the rest; one bought several desert plots and provided all the energy; one bought a few mountains and mined smithore; the fourth player concentrated on crystite. By using collusion to transfer goods cheaply and to make sure the crystite player got all the good crystite plots we ended up with a total worth of about \$150,000. But it all seemed a sterile exercise, so we outlawed collusion and discouraged co-operation -- nowadays, it's every man for himself.

Most of our games total out between \$55,000 and \$85,000, with the winner ending up worth \$20,000 to \$30,000. But our group recently played an aggressive, cutthroat game that totalled out at \$168,000! Here's how we did it.

You may think that it never pays to sell your goods on turn twelve. The Mechtrons certainly never do. And it doesn't make much sense to sell your goods to the store -- what would be the point?

Still, it isn't forbidden to buy or sell on turn twelve. You have to sit through all four auctions anyway, watching the time bars dwindle, until you see the final score. Why, we wondered, did the Bunten brothers (the game designers) bother to include these four dead auctions at the end?

Then it happened. In an otherwise-normal game, the third-place and fourth-place players both finished turn twelve's production with huge surpluses of energy and very little else. Numbers one and two had converted to crystite long ago, so there was almost no energy in play except that numbers three and four had between them.

The smithore, crystite, and food auctions were over, and the energy auction was about to begin. A short discussion occurred between numbers three and four, and number three positioned himself to sell while number four settled on the buy side. When the bidding started, number four ran the price of energy up to \$300 or so, and number three sold him one unit just before the gong went off.

When the final results came up, the two energy barons had moved into first and second place! The computer had evaluated their energy at its last sale price!

"Collusion!" cried the other players. "not true!" came the reply. After all, they hadn't excluded the others from participating in the auction.

This led to a heated argument, which almost broke up the group. What was the point in working hard for twelve turns if shenanigans like this could turn the game on its head on turn twelve?

Cooler heads prevailed, and we continued playing. We soon realized that this trick could be used on other turns. If, for example, there are only three unowned plots left, you may want to artificially inflate the worth of another player's goods to (temporarily) push him into first place -- then he won't be able to get a new plot.

And the trick can be used with other commodities as well. It's particularly effective in

crystite, since the price marker moves in \$4 increments -- you can bid it up to \$750 or so with no effort at all. (that's how we got \$168,000 in the game mentioned earlier. The loser ended up worth \$29,000)

What can the other players do to prevent these maneuvers? They must maintain ample supplies of all commodities, so that artificial price increases help them as well as the price fixers, or so that they can exhaust the fixers' cash by dumping the goods at a cheap price.

In a sense, this trick is collusion. It's a form of price fixing by the suppliers -- an oligopoly. You may want to forbid it in your games, since it makes the rest of the game both harder and lower-scoring. But it certainly adds a new dimension to M.U.L.E.!



Industry Report

ANTIC PUBLISHING INC., COPYRIGHT 1987
EXCERPTED BY PERMISSION

CEBIT '87
by CHRISTIAN SCHMITZ-MOORMANN
APRIL 4, 1987

The CEBIT fair at Hanover supposedly is the world's largest show in bureau and information electronics. CEBIT stands for: Computer, Electronics, Bureau, Information and Telecommunication. On an area of more than 205,000 square meters in 12 halls more than 2200 firms showed their products. This report is intended to give you an idea of what is happening in ATARI's stronghold. ATARI has sold over 120,000 STs (all models) in Germany alone. ATARI Germany has made up for almost 30% of ATARI's sales in 1986.

HARDWARE...

ATARI presented itself in its newly adopted white-and-blue look and on 50 1040s the software-houses presented their new products.

Before looking at the software I was pulled to the new MEGA-STs and that experience was great. The design was appealing and the keyboard a lot better than my 1040's. Alas, the MEGAs won't hit the stores before May or even June due to a slight timing- problem with the shifter-chip. This error results in small vertical black lines on the display. The delay in the MEGAs will probably also affect the PC since ATARI said they would only put out the PC after the MEGAs to show their preferences. But with Jack Tramiel one never can be certain. The last all

new product was the laser printer. Connected to one of the MEGAs, it was turning out page after page.

PRINT-TECHNIK presented its 3rd-generation digitizers. Their new Realizer digitizes a picture with up to 16 gray-levels in less than one second. It now plugs into the ROM-port. Its big brother, the PRO 87, digitizes 1024 pixels in 512 lines and 128 gray-levels. Both digitizers come with a toolbox-software and the PRO 87 also includes the necessary hardware for real-color images. PRINT-TECHNIK also offers a Genlock-interface for the ST.

GTI, a Berlin-based society, presented a VMEbus-interface that plugs into the DMA-port and includes a full bus-arbitration-logic and supports interrupts. The DMA-port is pulled through so that a hard-disk can still be used.

Another bus that opens your ATARI is produced by RHOTRON. It is plugged onto the CPU and has eight slots. Since installing the bus voids the warranty RHOTRON also offers a PC-like case in which the ST and the bus and a stronger power supply are incorporated. Rhotron offers several cards to fill the slots, from 2-Meg RAM to multifunction-cards they have just about everything, or how about a math-coprocessor?

LINDY, a maker of printer-cables and other computer add-ons also presented an oscillograph. It can be used as a sound-sampler or as a digital oscillo scope.

LANGUAGES AND BUSINESS SOFTWARE

Although there are many already, even more languages are offered for the ST. Some people even say that there is no other computer with more different languages available -- languages not only for developers.

Again, HEIM-Verlag has something for us. It is a powerful version of PROLOG that also supports GEM. The package consists of a compiler/interpreter system with around 140 functions. It is called SALIX-PROLOG and costs around \$120.

More sophisticated is MProlog by Berlin-based Epsilon. MProlog is also available on other computers like VAX, Macintosh, IBM etc. It costs around \$500 (?), and is designed for professional use.

Three different BASIC systems were shown. First there was GfA who showed version 2.0 of their interpreter and the almost final version 1.71 of their compiler. Frank Ostrowski, the author of GfA-BASIC is now busy writing a GfA-macro-assembler, lets wait and see. GfA will be represented in the US by MICHTRON.

The second BASIC shown was OMIKRON-BASIC which comes on a plug-in board for the ROM-port. It is even faster than GfA-BASIC in most functions, it calculates up to 19 decimals, supports matrices and a C-standard GEM-interface. It is MBASIC-compatible and there only is one problem. By the time it was published, most people had already bought GfA-BASIC.

The third newcomer has another nice feature. True-BASIC is available for ATARI, IBM, AMIGA and MAC and between these it is fully portable.

Like OMIKRON it offers matrices and it supports the full new ANSI-standard. It also has a special library for 3-D graphics.

BUSINESS...

A database was presented by ATARI itself. ADIMENS-ST is fully GEM-integrated (well almost), extremely fast, powerful and a high-quality product. To bad it still lacks a programming language, which for me as a developer is indispensable. ATARI said it is underway, though, and should be available by July.

A real goody was a piece of integrated software which was presented by a Yugoslavian firm. Its name is 'STEVE' and it is the most flexible spreadsheet I've seen, yet. One can do everything and nothing with it. It can be used as a spread-sheet naturally, a database, text-editor, graphic editor and mailing list facility. It allows user-definable function keys, two keyboard-tables, several fonts, abbreviations and dictionary in the text-editor and more. The program will retail in Germany for around DM 250, which is about \$110, but that was the maximum price. I'm waiting for this program!

WORD PROCESSORS & TOOLS

CEBIT '87 had plenty of Atari word processors to offer. DATA-Becker (their products are sold by ABACUS in the US) presented their new BECKER-text, the new version of TEXTOMAT ST (TEXTPRO). There are no more control-codes in the text (WYSIWYG) and it features an indexing function as well as an automatic table of contents. Graphics can be included and computation and tables are incorporated.

Again, ATARI offered an alternative to the just described program. I'm talking about the finally released '1st Word Plus'. This program cures most of the errors and oddities of the original 1st Word and adds some nice new features as well. It is going to be really difficult to make a choice between 1st Word Plus and BECKER-text since both have nice features the competitor does not have and as well there are still wishes I have for both.

A third text-editor which was not on the show, but has caused a lot of noise is SIGNUM! which is retailed by Application Systems in Heidelberg. SIGNUM! stands somewhere between a word-processor and a Desktop Publishing system. It allows up to seven fonts of 128 characters each at the same time. A character can be just about everything and an editor to create new character-sets is included. SIGNUM! offers macros and very powerful placing utilities. A reviewer called it a calligraphy-system. (Calligraphy is the art of embellishing writing).

TOOLS

G-DATA, based in Dusseldorf, has been known over here for its quality utility software. They have improved some of their old programs and added new ones including a program to make a Hard disk capable of auto-booting and several programs to make backups of a hard disk which has some nice features including data-compression, and file size of more than disk size.

The most powerful tool for disk-repair and editing is T.L.D.U. by FOCUS. This firm has made disk-monitors for years. T.L.D.U. is fully programmable and the disk comes with some example-macros which offer a good way to learn the necessary commands. The programming language is very C-like. The current release does not read or write some copy-protected disks, but an update has been promised for June. T.L.D.U. also includes a disassembler and an extensive manual.

CAD GRAPHICS & MIDI SOFTWARE

Harm-Bastian (HABA), which resides in Hamburg, has released its HABACAD-PL layout program. The program addresses only professional hardware-developers and the price of DM3000 (\$1200) seems rather hefty. No GEM support, but powerful routing routines.

Only for color monitors are the two Director programs ART DIRECTOR and FILM DIRECTOR by ANDROMEDA. This Hungarian firm has always been good for terrific programs and these two programs are among their best. The ART DIRECTOR is a drawing and painting program, but it offers most unusual features and is very flexible. The FILM DIRECTOR could be described as a slide-show program. But it is much more. Objects that have been created using the ART DIRECTOR are put together in several thousand frames, a background and music can be added and you have made your first animation- picture.

If you have the breath, it can take up to three hours. The directors import all kind of other graphic formats and when you add a video-digitizer there is no limit to your imagination.

SOUND

MUSIX 32, already in an enhanced version, allows programmers to add sound and music to their programs, which is played in background and interrupt-driven. Besides putting in the score it is possible to define the dynamics, the sound-wave and to perform transformations. Once you are done you can make a printout and incorporate the music in any C-, Pascal, or GFA- program. Other languages can also be used. MUSIX 32 has been created by the famous team of TOMMYSOFTWARE.

If you are interested in synthesizers and own an ATARI you won't get around STEINBERG. This firm has produced software and hardware already in the days of Commodore 64, but their ATARI programs and add-ons are first-rate. They offer everything from a sequencer (TWENTY-FOUR 2.0) to score-printing programs (MASTERSCORE), editing kits (pro16+) and their SOUND WORKS series, powerful tools for several synthesizers which help in designing new sounds, editing and mixing samples and much more.



ST Technical

BOOT ORDER AND FILE SORTING ON THE ST
by John Stanley

Software Consultant - DynaSoft Systems
(Condensed from a message chain on BITNET)

The Gem Desktop utility sorts the displayed file lists into one of four different sorting orders. There is no (known to me) way to shut off the sorting. In most cases, none of the sortings display the real order that the files lie on the disk. The AUTO folder contains programs that are run at boot-up time. The AUTO programs are run in "real" file order, not any of the sorted orderings...

This means that unless you are careful, you will have no control over which boot programs are run first, 2nd, ... last... Worse, the order in which the files were written to the folder will not necessarily be the physical order! If the folder had files in it, you went in and deleted one of them, and then added a file, the new file will probably take the place of the old file in the file-sequence.

You CAN get control of the physical layout of files in a folder, and thus set up the order of execution. The "trick" is that while files in an open folder (where the directory is displayed) when copied end up in the sorted order, when you copy a closed folder, the files end up in the same order they're "really" in because the desktop doesn't sort the contents of a closed folder....

The method I use to reorganize a folder is:

- 1) Create a new empty folder on my ramdisk with the name of the folder I want to replace.
- 2) Leave the ramdisk folder closed...
- 3) Open the original folder.
- 4) Copy the files ONE-AT-A-TIME into the closed ram-folder
- 5) Delete the original folder
- 6) Click and drag the CLOSED(!) ramfolder to it's new home.

(Many people don't quite understand how the ordering of files in an AUTO folder really works... Those that do often forget (or never knew) that when you drag a CLOSED folder, the files end up in the same "real" order as they were in the original...)

HEY ATARI! Any chance we can get an addition to the new (coming "real-soon-now") desktop for a 5th sorting option? Namely -un-sorted.... This would take a -very- small change in the desktop code, would take almost no extra code space (one new line on the menu bar and about 10 lines of code), and it would go a long way towards solving the Auto folder problems that many people are having...



Review

One Meg Memory Upgrades

For the ATARI 520ST

Posted on CompuServe, Source not Credited

Over the months I have collected information on three memory expansion boards for the ST, prior to purchasing one for my own use. Each has its strong points, as discussed below. Hopefully, this will help you to make a more informed decision when you decide to expand your 520ST. The three boards to be reviewed are from ThoughtSpace, AERCO, and Terrific Peripherals. All provide utilities on disk for checking your memory upgrade after installation.

THOUGHTSPACE DOUBLETHINK (TS1A) - Without a doubt, this is the most professionally promoted and detailed memory expansion of the three discussed here. All requests for information were promptly answered and neatly typewritten. For \$1.00 they will send you a copy of their 25 page installation guide. Installation requires removal of two IC's and several resistors, as well as cutting of selected circuit traces. The instructions are detailed and well illustrated. This is not for amateurs. The board then installs in the desoldered holes left from the IC's removal. This is a direct link to the motherboard, unlike the other expansion kits, which use ribbon cables. The

memory board sits approximately in the same area as the space bar on the keyboard, completely under the RF shield. The idea is to leave plenty of space for the blitter chip, RF modulator and other add-ons which may be provided at a later date by Atari.

ThoughtSpace claims that their board results in a system which is electronically identical to the 1040ST. For an additional \$20, ThoughtSpace will install the expansion board for you. ThoughtSpace retails for \$165. Doublethink has a 1 year warranty. ThoughtSpace Development's address is 2450 Warring St., No.21, Berkeley, CA, 94704. Phone:(415)845-1415.

AERCO easiST - This is the most flexible board in terms of future memory upgrades. The basic board supplies an additional 512K RAM for the ST, with room for up to 4 megabytes total memory. 2.5 meg of memory can be installed without modification to the board other than adding 16 1 meg RAM chips and sockets. Upgrades to 4 megabytes requires some soldering and cutting on the expansion board. Since 1 meg chips are approximately \$30 for the general public, upgrading past 1 meg is currently a very expensive option. Hopefully by next year the price of chips will have dropped to around \$5 or so.

Promotional materials for the AERCO board are professional, though not as detailed as ThoughtSpace. The eight page installation guide is concise and clearly illustrated. Installation requires removal of the MMU chip. This is the trickiest part of the procedure, since you need two jeweler's type precision screwdrivers to pry the chip out of its socket. If you're not careful, you can crack the socket and/or the chip. The MMU chip is reinstalled in a special MMU adapter socket, which is then plugged into the MMU socket on the motherboard.

Two pressure-type pin connectors install over two data buffer chips. While the MMU connector is very solid, the pin connectors appear less so. AERCO provides a special string for tying around the connectors to strengthen the fit, though they suggest that it is not necessary for dependable use. Ribbon-type cables run from the connectors to the expansion board. The board sits on the upper left corner of the motherboard, under the RF shield. One major advantage of this installation is that if you should develop problems with the expansion board or chips in the future, you can easily deinstall the board and still have a working computer while the board is being repaired.

A note of caution: the board covers ROM chip number 1, which is the installation point for the some clock chips. Both the memory board and clock chip will not fit under the RF shield. Terrific Peripherals sells a cable

adapter which is designed to relocate ROM number 1 and allow simultaneous use of both the memory expansion and clock. TP originally designed the cable to be used in the 1040ST, with their clock chip, since ROM number 1 on the 1040 is under the power supply.


List price for the AERCO board is \$189. For an additional \$20, they will preinstall 20 more sockets which will simplify future upgrades to 2.5 megabits. If just the thought of opening the case of your ST gives you the shivers, AERCO will install the board for a fee of \$25. AERCO supports a 1 year warranty. AERCO's address is Box 18093, Austin, TX 78760. Phone: (512) 451-5874.

TERRIFIC PERIPHERALS EZ-RAM - TP says they've sold thousands of their boards over the last year. They were one of the first on the market. Installation is the easiest of the three. A special MMU socket adapter connects directly to the socket on the motherboard without removal of the MMU chip. A ribbon cable connects to the memory expansion board. The video chip is removed from the motherboard and reinstalled on the EZ-RAM board. Instructions are printed on a single large page which folds out to cover your work area while you follow the easy to read diagrams and notes. The illustrations are clear and professionally drawn. EZ-RAM sits over the video chip socket under the RF shield. This leaves room for other add-ons later, such as the blitter chip or RF modulator. The video chip sits in its own RF "box", approximately under the arrow keys on the keyboard, prior to installation of the memory expansion. The top of the box is replaced by the expansion board. TP says that they have not had any problems with RF interference due to removal of the shield top and relocation of the video chip. EZ-RAM has a 6 month warranty and retails for \$199. Terrific Peripherals' address is 17 St. Mary's Court, Brookline MA, 02146. Phone: (617)-232-2317.

SO WHICH ONE DID I BUY? - I bought the AERCO board and installed it in approximately an hour. It would have taken less time, but I fiddled around trying to get the Z-Time clock chip to fit as well. AERCO has started using an improved MMU adapter which made installation fairly painless. I'm not expert enough to attempt the ThoughtSpace installation and I'm unwilling to give up my ST for even a few days.

I have few doubts that I'll want to upgrade to 2.5 Meg when it's more economical - simply because it's there. As for installation approach, the AERCO board appears to be a reasonable compromise between the more complex DoubleThink and the simple EZ-RAM, in terms of how one plugs into the necessary data lines to provide the additional memory. The 1 year warranty is also a big plus for me.

Add \$3.00 Shipping M-F 10am-7pm CST

 **M A R S** (312) 530-0988
merchandising

15 W 615 DIVERSEY, ELMHURST, IL 60126

☺ **NEW 8-BIT SOFTWARE** ☺

48k programs

✓ **PHANTASIE/SSI \$28.95** Great role playing game for adventurers of all ages.

✓ **TRAILBLAZER/Mindscape \$22.95** Lightning fast marble racing game with numerous courses, split screen & 1 or 2 player option.

IMPORTS from Europe

✓ **LASER HAWK HELICOPTER \$14.95**

Seek & destroy 5 enemy installations.

✓ **ROCKET REPAIR MAN \$14.95** Don your jet pack & explore mysterious caverns.

✓ **DAY AT THE RACE \$14.95** 1-5 players

✓ **TECHNICOLOR DREAM \$14.95** Great 256 colour drawing program.

✓ **FREAKY FACTORY \$14.95** Arcade action with over 200 rooms.

64k programs

✓ **THE PAWN/Firebird \$31.95** Requires 1050 disk drive or any drive able to read dual density (Rana, Track, Indus, etc.)


✓ **BOP N WRESTLE/Mindscape Master the Flying Body Press, Atomic Drop, Body Slam & 20 other moves as you battle 10 of the baddest, meanest, ugliest contenders of all time.** 64k req, 128k recommended

✓ **221B BAKER ST \$22.95** Solve 30 of the most difficult & intriguing cases as you match wits with 4 of the greatest sleuths of all time. 1-4 players, 3-d animation, and more 30-case libraries available.

✓ **AUTODUEL/Origin \$35.95**

✓ **INFILTRATOR/Mindscape \$22.95**

Add \$3.00 Shipping M-F 10am-7pm CST

 **M A R S** (312) 530-0988
merchandising

15 W 615 DIVERSEY, ELMHURST, IL 60126



Last Hacks

A ZIX BY ANY OTHER NAME
by Brian Goluszix (C.H.A.O.S.Z.I.X.)

Along with the "look and feel" lawsuits, there is a movement afoot to claim parts of the English language. Specifically, it seems that the prefix "Mac" may soon be reserved as the property of a certain corporation. So if you sell a chair that is made to fit perfectly with the Macintosh, you will not be able to call it a MacChair. Either license the "Mac" prefix, or you're stuck for a name.

The obvious way to avoid this legal problem is to substitute a "public domain" syllable. For example, substitute "Zix" for "Mac" or "ST". So my ST-Utterings column can become ZIX-Utterings, and your MacChair can become ZixChair. I hereby donate the word "Zix" to the public domain. Feel free to develop products like ZixThink, ZixPray, ZixEulogy, and Pan-Galactic Integrated Zix.

Of course, it will be confusing to use the "Zix" word for every product. If you're in the local computer boutique, and see ZixColor on the shelf, how will you know whether it's for the Amiga, Mac, ST, or the IBM? (Oh, I'm sorry, how will you know whether it's for the Zix, Zix, Zix, or the Zix?)

And will there be any confusion when you go to ZixDonald's, to order a Big Zix? Or for breakfast, an EggZixMuffin? A ZixZLT? Perhaps ZixDonald's could file a counter claim for the "Mac" word, using a "sound and sense" defense to counter "look and feel".

Shakespeare has no chance to bid for the "Mac" word, so it's ZixBeth from now on. Likewise, "When the shark bites . . ." you know that ZixHeath's back in town. And how long will it take Johnny to get used to trading jokes with Ed ZixMan? It only takes a few seconds for a good word processor to replace any privately claimed words with Zix, but what about all the previously published materials? Being from Michigan, I have sympathy for the map makers, as they make new issues for ZixInac Island and the ZixInac bridge.

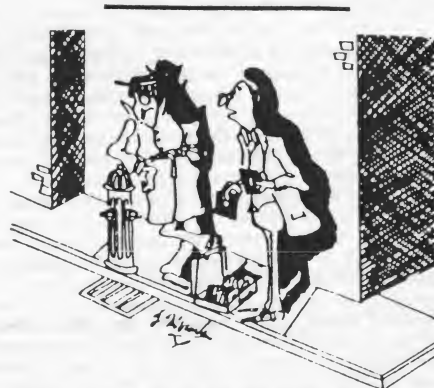
As the claiming of words grows, the use of Zix will spread beyond the "Mac" word. Prime

products that might require word protection are the spreadsheet "123", and the "Star" of WordStar. No problem with Zix. We can count "Zix, zix, zix, four". Or "four, zix, zix, zix, liftoff", if we're launching rockets. "Zix light, zix bright, first zix I see tonight" is certainly as poetic as the original.

Eventually, since we'll avoid claimed words, we will all talk like Smurfs (I'm sorry, Zix'es). I'll zix a new zix-processing zix for my zix system with 2 zix of ram and a 60 zix hard zix. But this is not so zix, and I'll zix a song in my zix:

Old ZixDonald had a farm . . . with a zix,
zix here and a zix, zix there, here a zix,
there a zix . . .

COMPUTERS



Are you sure they're in the public domain?

For Preferred Customers

MEI/MICRO CENTER's Unconditional Guarantee

Your satisfaction is unconditionally guaranteed or your money back. If for any reason whatever you are not satisfied with any Diskette purchased from us we want you to return it to us. We will be glad to exchange the Diskette or give your money back.

**NOT CHEAP ENOUGH?
CALL FOR LARGER
QUANTITY DISCOUNTS!
MENTION THIS AD!!!!!!
SLEEVES AND TABS
INCLUDED, SHIPPING
\$4 FIRST QUANTITY,
\$1 EACH ADDNL. QUAN.
HURRY, PRICES EXPIRE
WITHOUT NOTICE!
LIFETIME WARRENTY!**

Diskettes

27 ¢ each

5-1/4" DS/DD

Lots of 100

Sleeves Included

**MEI/MICRO CENTER
1555 W. LANE AVENUE
COLUMBUS, OH 43221**

**Premium
Diskettes**

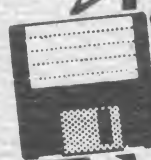


3-1/2" Diskettes

99 ¢ each

3-1/2" DS/DD

Lots of 50



3-1/2" Diskettes

89 ¢ each

3-1/2" SS/DD

Lots of 50

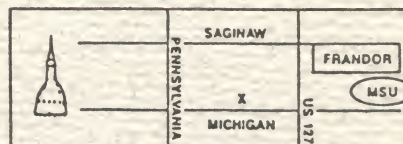
**CALL 1-800-634-3478
(Ohio) 1-614-481-4417**



COPY QUICK

PRINTING / COPYING

- Laser Printing
- Desk Top Publishing
- Same Day Service
- High Speed Copies
- Self Serve Discount
- Reductions/Enlargements



2401 East Michigan
Corner of Foster & Michigan
FREE PARKING FRONT & BACK
MON. thru FRI. 8:00am-6:00pm

487-0227

MENTION THIS AD & RECEIVE 20% OFF ANY PRINTING
(Good one time only)

Writing to/exchanging newsletters with...

MICHIGAN ATARI MAGAZINE

Please be certain that you are mailing to the correct address and NOT to the return mail address below!! Be sure WHICH club of the SEVERAL that participate in this Magazine it is that is exchanging this magazine with you! Exchanges of newsletters are encouraged.

Main Address

C.H.A.O.S./Michigan Atari Magazine
P. O. Box 16132
Lansing, MI 48901

Subscriptions to the MICHIGAN ATARI MAGAZINE are included with memberships in each of the participating clubs, or directly from the MAGAZINE for \$12.00 per year to addresses in the U.S., \$18 CANADIAN. Use the MAIN ADDRESS for subscriptions and inquiries, or contact any officer, editor, or the publisher at the phone numbers posted inside. Advertising rates are available on request.

Submissions from readers are encouraged. If possible, please make your submissions by electronic means. Submissions are accepted on the C.H.A.O.S. BBS (517-371-1106), or on disk, by mail or by giving a disk to any club editor.

RETURN ADDRESS ONLY!!!!
USE ADDRESSES INSIDE FOR
EXCHANGE NEWSLETTERS!!!

56 PHYSICS & ASTRONOMY
Michigan State University
East Lansing, MI 48824

Forwarding and Address
Correction Requested

Key #31-3589

POSTMASTER: DO NOT DELAY!
DATED MATERIALS! PLEASE RUSH!

NON PROFIT ORGANIZATION
U.S. Postage
PAID
East Lansing, Michigan
PERMIT NO 21